Farmington Active Transportation Plan

Connecting Our Community Through Safe Walking & Bicycling

MARCH 2016

FARMINGTON

alta PLANNING + DESIGN

ENSIGN
THE STANDARD IN ENGINEERING

This Plan was prepared for Farmington City by Alta Planning + Design and Ensign Engineering, with funding and planning assistance from the Wasatch Front Regional Council.

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The project team is especially grateful to the thousands of residents who participated by providing original ideas and feedback during the public open house, the online survey and interactive mapping data collection process and Planning Commission and City Council public hearings.

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Vision & Goals

"Farmington will improve quality of life and community health by connecting communities through safe walking and bicycling facilities and programs."

Goal #1: Education, Promotion, & Encouragement

- Encourage healthy lifestyles and active transportation through community activities and educational outreach centered on the benefits of walking and bicycling, facilities and programs, traffic laws, and proper etiquette
- Promote bicycling and walking as transportation choices that can be used for part or all of commute trips as well as for short trips (under 2 miles)
- Educate the public about active transportation's contribution to improved air quality
- Educate and encourage school age children and younger so that bicycling and walking are normal parts of their lives
- Advise decisionmakers and community stakeholders about the benefits of walking and bicycling
- Improve awareness of where end-of-trip facilities are (i.e. bike parking, accessible ramps) in order to encourage greater use

Goal #2: Enforcement

- Ensure that enforcement of traffic laws is equitable for all users (motorists, bicyclists, and pedestrians) in order to reduce violations and crashes
- Promote safety and usage through enforcement activities

Goal #3: Funding

- Standardize funding practices and mechanisms for bicycle and pedestrian improvements as an essential piece of recreation and transportation planning
- Support the creation of more local and state funding sources for bicycle and pedestrian improvements
- Reduce overall costs by funding and completing on-street bicycle facility improvements in conjunction with routine and future roadway projects

Vision & Goals

Goal #4: Maintenance

- Maintain roadways and bicycling and walking facilities so that they are safe and comfortable for all users
- Ensure that the design and implementation of bicycling and walking facilities minimize future maintenance costs by specifying quality materials and standard products

Goal #5: Other

- Improve quality of life, including personal and community health
- Increase economic development opportunities for current and future residents, business owners, and stakeholders

Goal #6: Planning & Design

- Plan, design, and maintain a walking and bicycling network that is visible, attractive, and convenient for all users, regardless of age or ability, especially commuters and driving-age students
- Ensure that facility designs encourage correct use and are easy to understand for all users
- Unite the east and west, especially across US-89, I-15, and Legacy Parkway, with bicycle and pedestrian improvements that are safe enough to feel comfortable riding with a young child
- Plan for bicyclists and pedestrians in all future public and private projects
- Improve overall connectivity and accessibility for bicyclists and pedestrians, including access to and from neighborhoods, services, public facilities, schools, shopping, food, entertainment, and transit
- Improve wayfinding through directional and informational signage and maps
- Continually coordinate with other planning efforts and surrounding communities

Goal #7: Safety

- Improve the safety and livability of the community by addressing and fixing deficiencies in on-street corridors and intersections
- Promote greater awareness of vulnerable users, especially by motorists, that will improve safety and comfort
- Ensure equitable access so that all children can safely walk and bike to school

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Southern entrance to Lagoon Trail (a section of the Farmington Creek Trail)

1: Introduction

About the Plan

Located at the base of the Wasatch Mountains and along the east side of the Great Salt Lake, Farmington is home to more than 20,000 people, with a population density of about 2,600 residents per square mile (7.8 square miles total) and is the seat of Davis County. The city's motto, "Historic Beginnings", refers to the pioneer spirit that helped settle the city.

Table 1.1 *Farmington City, Davis County, & Utah Demographics*

	Farmington	Davis County	Utah
Total Population	**20,440**	317,646	2,858,111
Median Household Income	**$84,110**	$70,388	$59,846
Median Age	**28.7**	29.9	29.9
Population Under 16	**33.4%**	30.5%	28.0%
Population 70 & Over	**4.4%**	5.9%	6.3%
Population in Work Force	**45.9%**	48.2%	49.0%

Data: American Community Survey (ACS) Five-Year Estimates, 2010-2014

Farmington has already invested in many assets that contribute to enhanced bicycle and pedestrian comfort, such as accessible local parks and open space; surface streets with low speeds, low traffic, and sidewalks; and an extensive existing network of shared-use trails including the Legacy Parkway Trail, Denver and Rio Grande Western Rail Trail, Bonneville Shoreline Trail, and smaller neighborhood trails.

As Farmington continues to develop, it is important for the city to maintain its "old town feeling" and the quaintness and safety many moving to Farmington are seeking. The City has chosen to develop the Farmington Active Transportation Plan in order to guide the development of Farmington's bicycling and walking infrastructure, programs, and culture in coming years.

The recommendations in this plan and its appendices may change as the City changes, as priorities shift, and as opportunities arise to complete project. The plan should be considered a fluid document that will move with the City. Some of the projects may need to be implemented incrementally and specific recommendations may be altered; specific and recommended facility types are the ultimate goal, but other treatments may need to be used in the interim.

Why Walking & Bicycling?

Bicycle and pedestrian mobility, or "active transportation", is an important component of overall mobility, in concert with automobile-based transportation and transit. There are numerous reasons why, in addition to improved mobility, active transportation should be integrated with the existing development in and future growth of Farmington.

MOBILITY, INDEPENDENCE, AND AGING IN PLACE

Nearly 40%, or about 7,700, of Farmington's 20,440 residents are under 16 or 70 or more years old and are not legally able or are less likely to drive, respectively. This plan does not focus only on able-bodied adults that already enjoy walking and bicycling. Rather, it is especially for those who will be given greater independence as the bicycling and walking system improves. As the "under 16" and "70 and over" age groups become more mobile through walking and bicycling, fewer automobile trips will be made by their caretakers and parents, thereby improving the dependents' health, reducing the impact on the environment, and reducing traffic congestion, especially around schools at drop off and pick up times.

Young kids walking to Snow Horse Elementary School (Photo: Shaunna Burbidge)

ECONOMICS

Active transportation makes economic sense. Benefits include decreased family transportation costs[1], lower healthcare costs[2], more jobs created by way of capital infrastructure projects[3], and higher property values[4]. For example, bicycling and walking construction projects create more jobs per million dollars spent than roadway projects alone.[5]

Facilities such as shared-use paths and trails can also positively influence property values. Nearly two-thirds of homeowners who purchased their home after a path or trail was built said that the it positively influenced their purchase decision. Eighty-one percent felt that the nearby path or trail's presence would have a positive effect or no effect on the sale of their homes.[6]

Americans say that having bike lanes or paths in their community is important to them, and two-thirds of homebuyers consider the walkability of an area in their purchase decision.[7] This preference for communities that accommodate walking and bicycling is reflected in property values across the country.[8] Houses in walkable neighborhoods have property values $4,000 to $34,000 higher than houses in areas with average walkability.[9]

ENVIRONMENT

Air quality along the Wasatch Front fluctuates widely depending on the season and other factors. Promoting

1 AAA's "Your Driving Costs" Report (2013); League of American Bicyclists; Bureau of Transportation Statistics "Pocket Guide to Transportation" (2009); Metro Magazine, August (2014); Internal Revenue Service; "Quantifying the Benefits of Nonmotorized Transportation for Achieving Mobility Management Objectives".

2 Rous, Larissa, et al. "Cost Effectiveness of Community-Based Physical Activity Interventions". American Journal of Preventive Medicine, 2008; Pratt, Macera & Wang. Higher Direct Medical Costs Associated with Physical Inactivity, 2000; Chenoweth, D. The Economic Costs of Physical Inactivity, Obesity, and Overweight in California Adults: Health Care, Workers' Compensation, and Lost Productivity. Topline Report, 2005.

3 Heidi Garrett-Peltier, "Pedestrian and Bicycle Infrastructure: A National Study of Employment Impacts", 2011.

4 "Walking the Walk", CEOs for Cities, 2009; Lindsey, Greg, Seth Payton, Joyce Man, and John Ottensmann. (2003). Public Choices and Property Values: Evidence from Greenways in Indianapolis. The Center for Urban Policy and the Environment; "Valuing Bike Boulevards in Portland through Hedonic Regression", 2008.

5 Heidi Garrett-Peltier, Pedestrian and Bicycle Infrastructure: A National Study of Employment Impacts, Political Economy Research Institute University of Massachusetts, Amherst, 2011, 1.

6 "Omaha Recreational Trails: Their Effect on Property Values and Public Safety". Rivers and Trails Conservation Assistance, National Park Service. Donald L. Greer, 2000; "Nebraska Rural Trails: Three Studies of Trail Impact". Rivers and Trails Conservation Assistance, National Park Service. Donald L. Greer, 2001.

7 Bureau of Transportation Statistics. (2010). Transportation Statistics Annual Report. Retrieved from: http://www.bts.gov/publications/transportation_statistics_annual_report/2010/.

8 Racca, D.P. and Dhanju, A. (2006). Property Value/Desirability Effects of Bike Paths Adjacent to Residential Areas. Prepared for Delaware Center for Transportation and the State of Delaware Department of Transportation.

9 Cortright, J. (2009). Walking the Walk: How Walkability Raises Housing Values in U.S. Cities. CEOs for Cities.

active transportation over single-occupant vehicle trips is one way to mitigate seasonal air quality problems. Vehicles are the primary source of PM 2.5 pollutants, which account for almost half of typical winter workday emissions.[10]

Bicycling and walking produce low land use impact, no direct air or water pollution, and minimal noise and light pollution. Nearly one-third of all developed land is dedicated to roads. Because of the smaller operator and vehicle footprint of pedestrians and bicyclists, not only does demand for streets and parking decrease but also the amount of road space required. Hence, less dependence on oil to make roads and more space for public space, buildings, food production, and homes.[11]

As of 2003, 27% of U.S. greenhouse gas emissions were attributed to the transportation sector and personal vehicles accounted for 62% of all transportation emissions.[12] Replacing two miles of driving each day with walking or bicycling prevents 730 pounds of carbon dioxide from entering the atmosphere annually.[13] This reduction minimizes the transportation sector's air quality impacts, improves air quality, and decreases public health concerns such as asthma.

QUALITY OF LIFE

Bicycling and walking are also important ways to improve quality of life for existing and prospective Farmington residents. Millennials and baby boomers alike are trending towards locations where they can ride a bike or walk to access their daily needs.

Cities that invest in active transportation are investing in people and their quality of life. Business decisions are increasingly being made based on quality of life amenities for employees and their families. Sidewalks, on-street bicycle facilities, multi-use paths, and transit service are important quality of life indicators. They demonstrate a commitment to healthy transportation options and lifestyles.

SAFETY & HEALTH

In cities where more people begin their commutes to work by walking or bicycling, corresponding fatality rates are generally lower. This is in contrast to critics who fear a higher rate of crashes when more bicyclists and pedestrians are using the existing or future on- and off-street system.[14]

Studies show that installing pedestrian and bicycle facilities directly improves safety by reducing the risk of pedestrian-automobile and bicycle-automobile crashes. For example, streets with bike lanes have been shown to be safer not just for bicyclists (compared with no bicycle facilities), but also for pedestrians and motorists.[15] Streets without bicycle facilities may pose a greater collision risk. When walking and bicycling rates double, per-mile pedestrian-motorist collision risk can decrease by as much as 34%.[16]

In addition to the safety benefits that occur when more people are walking and bicycling, active transportation can have many positive impacts on personal and community health issues such as diabetes, heart disease, and obesity. In 2013, 7.1% of Utahns were considered diabetic and 24.1% were obese (part of the 56% that were overweight).[17] Although these statistics rate favorably when compared to other states' and national levels, there is room for improvement in Utah communities. States with higher levels of bicycling and walking to work have lower levels of diabetes, obesity, and high blood pressure, and higher percentages of the population meeting recommended weekly physical activity levels.[18]

10 Utah Clean Air Partnership. Sources of Emissions (http://www.ucair.org/sources-of-emissions).

11 Hashem Akbari, L. Shea Rose and Haider Taha (2003), "Analyzing The Land Cover Of An Urban Environment Using High-Resolution Orthophotos," Landscape and Urban Planning (www.sciencedirect.com/science/journal/01692046), Vol. 63, Issue 1, pp. 1-14.; Chester L. Arnold Jr. & C. James Gibbons (1996): Impervious Surface Coverage: The Emergence of a Key Environmental Indicator, Journal of the American Planning Association, 62:2, 243-258; Todd Litman (2010): Evaluating Active Transport Benefits and Costs, Victoria Transport Policy Institute.

12 Office of Transportation and Air Quality, Environmental Protection Agency. (2006). Greenhouse Gas Emissions from the U.S. Transportation Sector: 1990-2003. Report number EPA 420 R 06 003.

13 Federal Highway Administration. (1992). Benefits of Bicycling and Walking to Health.

14 Alliance for Biking and Walking, Bicycling and Walking in the United States, 2014 Benchmarking Report.

15 Ewing, R. and Dumbaugh, E. (2010). The Built Environment and Traffic Safety: A Review of Empirical Evidence. Injury Prevention 16: 211-212.

16 Jacobson, P. (2003). Safety in Numbers: More Walkers and Bicyclists, Safer Walking and Bicycling. Injury Prevention 9: 205-209.

17 Trust for American's Health. Key Health Data about Utah (http://healthyamericans.org/states/?stateid=UT).

18 Annual Survey Data. Behavioral Risk Factor Surveillance System. Centers for Disease Control, 2011; "2014 Benchmarking Report", p. 70. Alliance for Biking and Walking. http://bikewalkalliance.org.

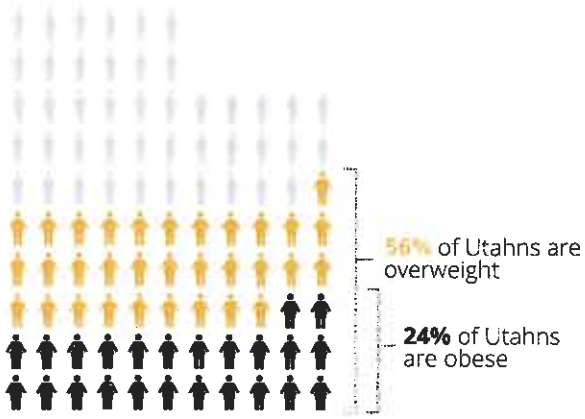


Figure 1.1 *Overweight & Obese Population in Utah (Centers for Disease Control, BRFSS, 2013).*

The Centers for Disease Control and Prevention recommend at least 2.5 hours of moderate exercise each week, yet many people do not have convenient access to places where they can be physically active. Walking and bicycling are some of the most basic forms of physical activity. Improving facilities for these activities and linking them to recreational and daily destinations would help better connect people with convenient exercise options.

Studies show that people walk more in safe, walkable, and aesthetically pleasing places. Improved facilities promote physical activity by making walking and bicycling more appealing, easier, and safer.[19]

Walking and biking also provide greater social interactions than some other forms of transportation. These interactions may be associated with mental health and social engagement benefits.

With some changes to street designs for bicycling and walking, motorists may be concerned that the possibility for conflict will increase. In reality, many street changes increase safety and comfort for motorists as well as bicyclists and pedestrians. Lane narrowing or reduction often improve driver safety. Providing pedestrian and bicycle facilities also increases predictability in interactions between motorists and those walking or bicycling, thus creating a safer and more comfortable environment for everyone.

19 Robert Wood Johnson Foundation. Active Transportation: Making the Link from Transportation to Physical Activity and Obesity. Active Living Research. Research Brief; 2009. Available at http://www.activelivingresearch.org/ files/ALR_Brief_ActiveTransportation.pdf.

Local Walking & Bicycling Trends

Farmington's character as a bedroom community has been changing in recent years as more companies choose to call Farmington home. However, only about 500 (or 7%) of the 7,510 employed Farmington residents also work in Farmington. The remaining 93% leave the city for work everyday, the majority of which commute between 10 and 24 miles south of the city, likely to Downtown Salt Lake City. Of the 5,812 total jobs in Farmington, the remaining 5,300 are held by those living outside the city.

Because bicycling and walking trips are typically shorter trips, traditional data sources like the American Community Survey, which focuses on commute to work trips, do not reflect the amount of active transportation trips within city limits. Additional survey data that tracks all types of trips regardless of purpose is helpful in a community of Farmington's size and character.

AMERICAN COMMUNITY SURVEY (ACS) JOURNEY TO WORK DATA

The American Community Survey (ACS) Journey to Work data measures changes in mode share over time. Unfortunately, the ACS only collects information about the main transportation mode for trips from home to work (only 19.6% of all trips made in Davis County, according to the Utah Travel Study) and excludes trips made by those outside of the workforce (including children, retirees, unemployed residents, and stay-at-home parents) and those who commute by different means depending on the day, weather, and time of year.

ACS also excludes trip purposes like shopping, going to and from school, and recreational outings. Capturing non-commute-related bicycling and walking trips is important because of how many Farmington residents work outside of the city at distances that require considerable effort to travel by foot or by bike. Though useful in many communities (and possibly viable in the future following local increased job growth and local employee recruiting in Farmington), the American Community Survey's Journey to Work data is not an accurate representation of current or future walking and bicycling activity.

UTAH TRAVEL STUDY

The 2012 Utah Travel Study was a statewide survey and report that contains a wealth of information on statewide and local transportation behaviors, attitudes and trends. The primary tool of the study, the household travel diary, was supplemented by additional surveys including a bicycle and pedestrian barriers survey. Due to plans to reproduce the surveys every 8-10 years, the tremendous amount of valuable data cannot be monitored from year to year (which the ACS can), making tracking incremental progress difficult.

A combined estimated 5.4% of all trips in Farmington are done by walking and bicycling. As shown in Figure 1.2, walking and bicycling trips in Farmington are less common than in Davis County and Utah statewide.

Figure 1.3 identifies the most and least common trip purposes and shows that "Home to Other" and "Home to School" are the most common walking trip purposes, "Home to Work" and Non-home to Work" are the most common transit trip purposes, and that "Home to Other" and "Home to Work" are the most common bicycling trip purposes. These are trends that do not show up in Figure 1.2.

The analysis zone (AirSage zone) that includes Farmington, 1104, and for which the previous data is applicable, also includes Centerville.

Making local, shorter trips to school, recreation, church, and shopping easier will have a greater impact on health, transportation demand, and overall bicycling and walking mode share, rather than focusing predominantly on longer, commute type trips. Some of Farmington's major destinations, such as the FrontRunner station, Station Park, the library, elementary and middle schools, Oak Ridge Gold Course, trails, the foothills, and churches, are partially or completely disconnected from existing shared-use paths, bike lanes, sidewalks, and neighborhoods.

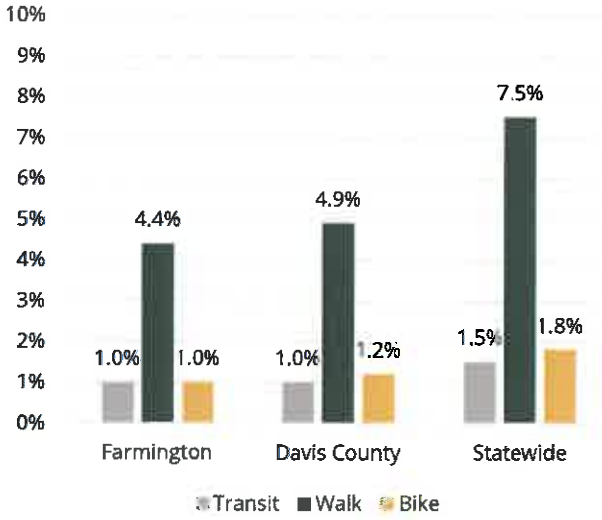


Figure 1.2 *Non-Automobile Mode Shore (% of Total Trips) in Farmington, Davis County, and State of Utah (Utah Travel Study)*

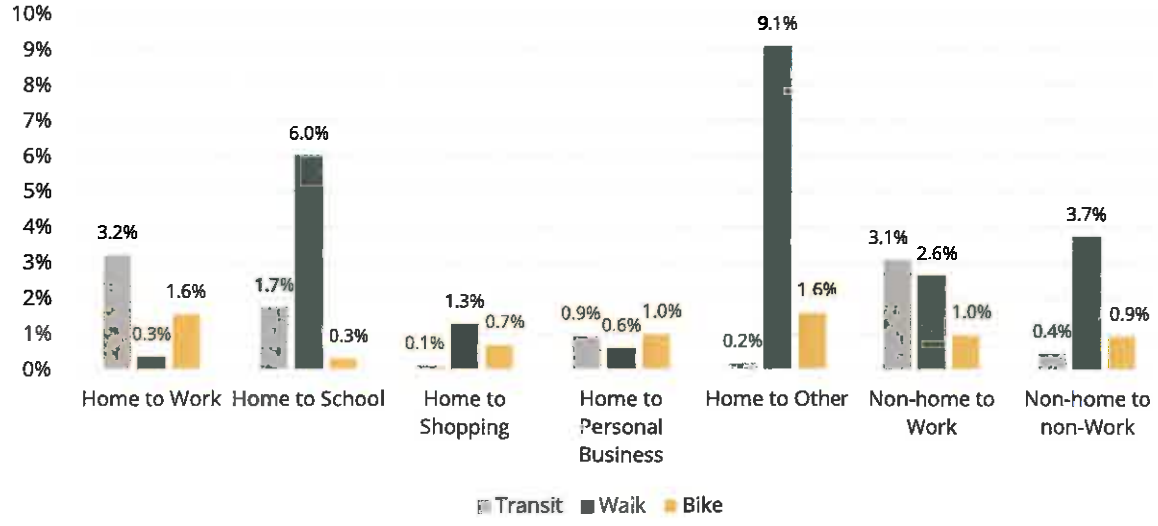


Figure 1.3 *Walking, Bicycling, and Transit Trip Purpose Mode Shares in Davis County (Utah Travel Study) Note: Figure 1.3 depicts trip purpose for residents in Davis County, instead of Farmington, due to the sample size for Farmington being too small.*

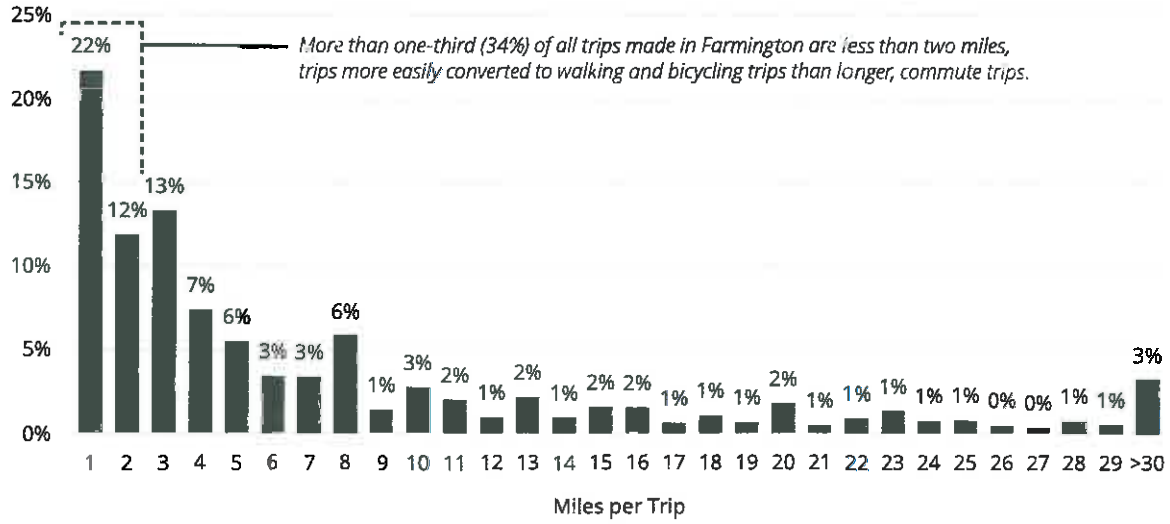


Figure 1.4 *Trip Distances in Farmington (Utah Travel Study)*

Youth Responses

According to the Utah Travel Survey, 20.7% of trips taken by Kaysville and Farmington residents under 16 years old are to school and 60.1% are for recreation, leisure, or unspecified purposes.

National Walking & Bicycling Trends

Farmington's walking and bicycling mode shares are below national averages. Data collected from the National Household Travel Survey (NHTS) and American Community Survey (ACS) in recent years estimate that out of all trips made in the U.S., regardless of purpose, 1.0% are made by bicycle and 10.4% are by foot. In fact, commute-related bicycling trips in the United States have increased 60% from 2000 to 2012.[20] Farmington is equal to the national average for bicycling, but lower for walking.

Connectivity To Transit

Nearly every transit trip begins as a walking or bicycling trip. According to the Utah Travel Study, 22% of trips in Farmington are one mile or less and 33% are two miles or less. There is great potential for Farmington residents to ride a bike or walk to take transit, especially within the city.

FRONTRUNNER COMMUTER RAIL

The Farmington UTA FrontRunner station (450 N 800 W) opened in 2008 as one of the stations on the region's first commuter rail corridor between Ogden and Salt Lake City. It also has 874 automobile parking spaces, the most of any station in UTA's system.

The station can be accessed on foot or by bike via Legacy Parkway Trail or via Clark Lane to the south and riding or walking through the Station Park parking lot. Arterial and collector roads surrounding the station do not have bike lanes or paths, and Park Lane to the north does not have sidewalks or shoulders, limiting connectivity to northern parts of Farmington and Lagoon.

Each FrontRunner train is equipped with at least one car that accommodates 9-15 bikes by replacing seats from one side of the car's lower level with bike racks. During peak commute hours, these cars are usually filled beyond capacity with bicycles.

UTA's new 15-bike racks on FrontRunner will improve bike stability, avoid damage, and aid in easy removal. They will be tested and implemented in 2016 (Photo: Utah Transit Authority)

20 "Benchmarking", 12-13.

Table 1.2 *UTA Rail and Bus Routes Serving Farmington*

	Service Type	Frequency	Daily Avg. Boardings	Origin	Terminus	Destinations Served
455	Regional Fixed	Weekday, 30 minutes	1,589	Univ of Utah	Downtown Ogden	Univ of Utah, Downtown, SLC, Lakeview Hospital, **Farmington FrontRunner, Hwy 89**, Weber State, Downtown Ogden
456	Minor Regional Fixed	Weekday, 1 Morning (SB) & 1 Evening (NB)	46	Downtown Ogden	North Temple & 1400 West (SLC)	Downtown Ogden, Layton Hills Mall, **Farmington FrontRunner, Legacy Pkwy**, North Temple
470	Regional Fixed	30 Minutes (Mon-Sat), Hourly (Sun)	3,797	Downtown SLC	Downtown Ogden	State Capitol; **Lagoon (Sundays, Summer)**; DATC; Layton, Clearfield, and Ogden FrontRunner, Newgate Mall
473	Regional Express	Weekday Morning (SB) and Afternoon (NB) Commutes, 30 Minutes	645	Univ of Utah	Downtown Ogden	Univ of Utah, Downtown SLC, **Farmington FrontRunner, Hwy 89,** Weber State, Ogden FrontRunner and Downtown
477	Minor Local Shuttle	Weekday, 1 Morning (NB) & 1 Evening (SB)	33	Pioneer Adult Rehab Center (PARC)	Center & Orchard (North Salt Lake)	PARC Center, cities between Layton and North Salt Lake
667	Minor Local Shuttle	Saturday, 30 Minutes	n/a	Farmington FrontRunner	Lagoon Drop Off Area	**Farmington FrontRunner, Lagoon Amusement Park, Downtown Farmington, Park Lane Hampton Inn**
750	FrontRunner Commuter Rail	Weekday, 30 minutes (peak) & 60 minutes (off-peak); Saturday, 60 minutes	488/511*	Ogden	Provo	Downtown Ogden, Roy, Clearfield, Layton, **Farmington FrontRunner,** Woods Cross, Salt Lake City, points south

Data: Utah Transit Authority

**488 boardings and 511 alightings, on average, throughout the year at the Farmington FrontRunner Station. Usage ranges from about 433/435 in the winter and early spring to about 562/595 in the summer.*

BUSSES

The FrontRunner station is also served by bus routes 455, 456, 473 (Express), and 667 (Lagoon Shuttle), in addition to the two other routes which serve Farmington but not the station: 470 and 477. All busses serving the Farmington area accommodate bicycles in a front-mounted rack that will fit either 2 or 3 bikes, depending on the model. Trips that begin and/or end by bike can be linked with transit. Other bus route information, including average daily boardings (usage), is found in Table 1.2.

Improving access to and from bus stops and transit stations, making it possible to take a bicycle with you on the bus, and providing secure bike parking at stops or stations, among other improvements, will allow transit users to comfortably ride a bike or walk the first or last mile of a transit-centered trip, making transit more attractive and feasible for people in Farmington.

UTA's busses accommodate 2-3 bikes, depending on the route (Photo: Utah Transit Authority)

Existing Plans & Studies

The execution of the Active Transportation Plan will require coordination with many departments and stakeholders in order to actively promote bicycling and walking within the city and improve connections to regional destinations. Coordination with different planning efforts can also take advantage of opportunities to share resources and leverage greater community value during future projects.

A review of relevant, existing documents also helps to understand the City's overall vision, planning history, limitations, and direction found in existing codes and policies. With a clear understanding of this planning context, the Farmington Active Transportation Plan seeks to develop compatible and coordinated goals and recommendations.

TRAILS MASTER PLAN

Farmington City has successfully created and adopted a citywide trails master plan as part of their general plan. The missing element of this plan, however, is addressing on-street facilities within the city. It states that the City has a strong desire to continue improving the health and safety of its residents, which can be fulfilled in part by promoting recreation and transportation choices, mitigating traffic congestion, and improving traffic safety between all modes.

All existing paved and unpaved bicycling, walking, and hiking trails are included in the Trails Master Plan map (Figure 1.5) in the General Plan, as well as proposed trails that fill gaps in the existing trails system, follow natural features like valleys and creeks, connect to schools and neighborhoods, and provide better connectivity to the foothills.

WEST DAVIS CORRIDOR INITIAL PLANS AND EIS

The Utah Department of Transportation (UDOT) plans to construct a new, four-lane divided highway that would function as the northern extension of Legacy Parkway (which currently ends at Park Lane) that will be called the West Davis Corridor. The purpose of the corridor is to reduce user delay on the existing system due to an ever-growing population and, therefore, more

Figure 1.5 *Farmington Trails Master Plan Map (orange dashed lines are proposed trails)*

cars on the road in the future. It will act as a parallel, alternative route to I-15 on the west sides of Kaysville and Farmington skirting the Great Salt Lake, extending from Farmington on the south to West Haven in Weber County on the north. In its current design phase, UDOT does not have plans to include a bicycle and pedestrian trail or other active transportation facilities along the corridor north of Farmington.

There are several design alternatives for the southern end of the West Davis Corridor that would affect Kaysville and Farmington, namely, two interchange options that would connect to either Shepard Lane or Glovers Lane. The Shepard Lane option (Figure 1.6) poses significant connectivity challenges for bicyclists and pedestrians, especially those that are traveling east and west. This option provides a work around route under the interchange for the D&RG Western Rail Trail, the only existing off-street, shared-use connection in

Figure 1.6 *West Davis Corridor's Shepard Lane Interchange Design Option (UDOT)*

the area. The Environmental Impact Statement (EIS) acknowledged the need to purchase homes, affect sensitive lands and habitats, and that the corridor would bisect communities and affect access to parks, schools, and homes.

There are several environmental, governmental, and citizen groups that either completely or partially oppose UDOT's plans for a new highway. They are asking for different levels of mitigation, from more access and facilities for bicyclists and pedestrians to a no-build alternative.

UTAH COLLABORATIVE ACTIVE TRANSPORTATION STUDY (UCATS)

UCATS developed a regional, active transportation resource and infrastructure master plan that enhances and coordinates pedestrian and bicycle connectivity. It lays the groundwork for an urban network of bicycle routes (UCATS Regional Bicycle Network) throughout the Wasatch Front and recommends pedestrian connections to transit within one mile of UTA's TRAX and FrontRunner stations.

UCATS Area 5: Fort Lane/Main Street Bike Lanes: Layton, Kaysville, Farmington and UDOT

The proposed facility in UCATS Area 5 connects to two FrontRunner stations (Layton and Farmington), and accommodates bicyclists and pedestrians over major interchanges on US-89, Legacy Parkway, and I-15. It creates a north-south regional link east of I-15, where facilities are currently limited. The proposed route would extend from the Layton FrontRunner station along Gentile Street to Fort Lane and Main Street, then south on Main Street to Farmington's Park Lane, and finally connect to the Lagoon Frontage Road from Park Lane (Figure 1.9).

WFRC 2015-2040 REGIONAL BASE TRANSPORTATION AND PRIORITY BIKE ROUTES PLANS

These plans address the existing and anticipated future bicycling and walking network and routes in Salt Lake, Tooele, Davis, Morgan, Box Elder, and Weber Counties. The planning effort is divided into two plans: a 2015-2040 Bicycle Base Network, which includes all local and county plans, and a 2015-2040 Regional Priority Bicycle Network, which is based on the findings and recommendations in the UCATS study. The studies also include bicycle compatibility index (BCI) and bicycle level of service (BLOS) scores that indicate the perceived comfort and suitability of all major roadways in the area.

UDOT STATE BICYCLE PLAN AND REGION 1 BIKE PLAN

The State Bicycle Plan (2014) is composed of separate bike plans from each of the four regions in Utah. The Plan focuses mostly on gaps on state routes throughout the Wasatch Front region, and represents the initial efforts of what will become a more comprehensive plan that will eventually comprise many different types of UDOT facilities in both urban and rural parts of Utah. The Region 1 Bike Plan, which includes Farmington and Kaysville, recommends "planned bicycle network" facilities on the following roadways, which are currently identified as gaps or barriers to bicycling because of road width, truck traffic, traffic speed and volumes, etc.:

- 200 N (I-15 to Main St)
- Main St (200 N to US-89 by Cherry Hill)
- Main St and 200 E (Shepard Lane to Chase Ln in Centerville)
- Park Lane (Main St to I-15)
- State St (400 W to Main St)

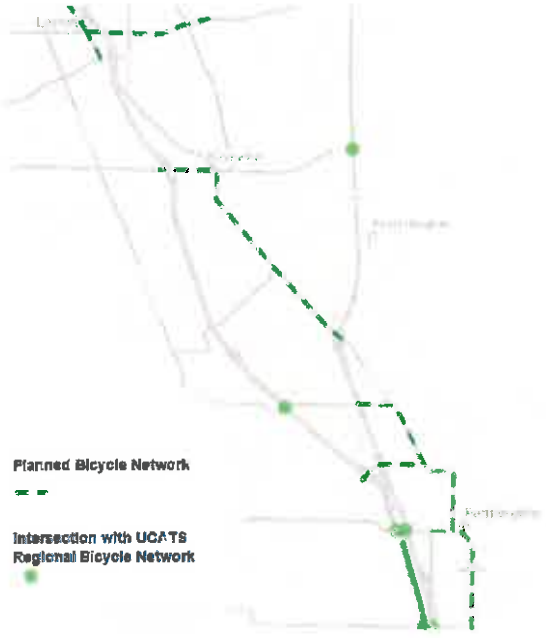


Figure 1.7 *Region 1 Bike Plan Map (Kaysville and Farmington)*

DAVIS COUNTY TRAILS MASTER PLAN

In 2004, Davis County created a countywide trails master plan in order to improve trails coordination between jurisdictions and to, hopefully, provide recreation and alternative transportation routes, as well as access to open spaces, wildlife habitats, and natural areas.

The Plan identifies, defines, and gives background about regionally significant trails. Some of the information is now out of date, but the developmental history of these trails is important. The regional trails identified in the plan are: the Bonneville Shoreline Trail, Denver & Rio Grande (D&RG) Western Rail Trail, Legacy Parkway Trail, Kays Creek Parkway Trail, Farmington Creek Trail, Jordan River Parkway Trail, Emigrant Trail, Power Line Trail, Weber River Parkway, Davis & Weber Canal Trail, Farmington Bay Waterfowl Management Area Trails, and Antelope Island Trails. Most of these are located or are important to bicycling and walking connectivity in Farmington or Kaysville.

The Davis County Online Trails Map lists the following bicycle trail classes or types and locations:

- Class 1 – May be paved or unpaved, could have steep grades, and can be shared with pedestrians (or, Shared Use Path)
- Class 2 – Striped or signed lane for one-way bike travel on a street, usually one with a wider shoulder to accommodate the bicycle lane (or, Bike Lane)
- Class 3 – Signs designate the route for bicycle travel on a roadway shared with motor vehicles (or, Shared Roadway or Bike Route)
- Proposed Bike Routes – Routes that will potentially be Class 2 (Bike Lane) or 3 (Shared) facilities. Routes are proposed on most major streets in Kaysville and Farmington, including 200 N, Main St, Fairfield St, Shepard Ln, 200 E, State St, Clark Ln and Glovers Ln (east of the D&RG Western Rail Trail), and Frontage Rd (south of Glovers Ln).

DAVIS COUNTY COMMUNITY HEALTH IMPROVEMENT PLAN (2014-2018)

The Davis County Health Department convened partners in 2013 to identify Davis County's health improvement priorities, mobilize partners to address the priorities, and prepare a community-wide health improvement strategic plan. Davis County health priorities that were selected are: Suicide, Obesity,

Access to Mental & Behavioral Health Services, and Air Quality. The five year Davis County Community Health Improvement Plan, also known as the CHIP, is an important tool in public health to bring community partners together to strategically align to address community health priorities. Active transportation is a significant strategy included in the plan because of the physical activity, air quality, and mental health benefits which crosscut all priorities.

Asset and Gap Analysis

Davis County is the top-ranked county in Utah for sidewalk connectivity. Only 7% of Davis County residents report that there are no sidewalks in their neighborhood. Statewide, 18% of residents report no sidewalks. While most residents have sidewalks, 41% of residents in Davis County would like more sidewalks. While sidewalks and trails are strengths in the communities in Davis County, there are gaps that have been identified that prevent active transportation.

Identified weaknesses include: very limited on-street bike lanes, lack of neighborhood connectivity, unsafe routes to schools, few bicycle or pedestrian paths across freeways, highways, overpasses, and rail lines to access shopping and entertainment, few bike racks, and difficulty accessing public transportation on foot or by bike.

Strategies to combat these identified deficiencies include:

- Fun, free and safe physical activity opportunities for families
- Active transportation options that are accessible and affordable for all users
- Transportation and land-use policies that provide opportunities for all people to be active and engaged in their communities
- A Complete Streets approach, where streets are designed and operated to enable safe access for all users
- Expansion of Safe Routes to School programs, which encourage children to walk and bike to school safely
- Incentives for transportation and transit projects that promote health

The Plan seeks to:

- Increase the number and quality of bike lanes
- Improve connectivity between neighborhoods
- Improve connectivity of non-auto paths and trails
- Encourage communities adopt to the Utah Bicycle and Pedestrian Master Plan Design Guide
- Improve and promote Safe Routes to School plans
- Improve active transportation connections to transit
- Improve walkability index to Frontrunner stations
- Increase transit pass incentive programs
- Reduce percentage of Davis County workforce that commutes alone
- Increase percentage of Davis County residents who use public transportation to commute to work

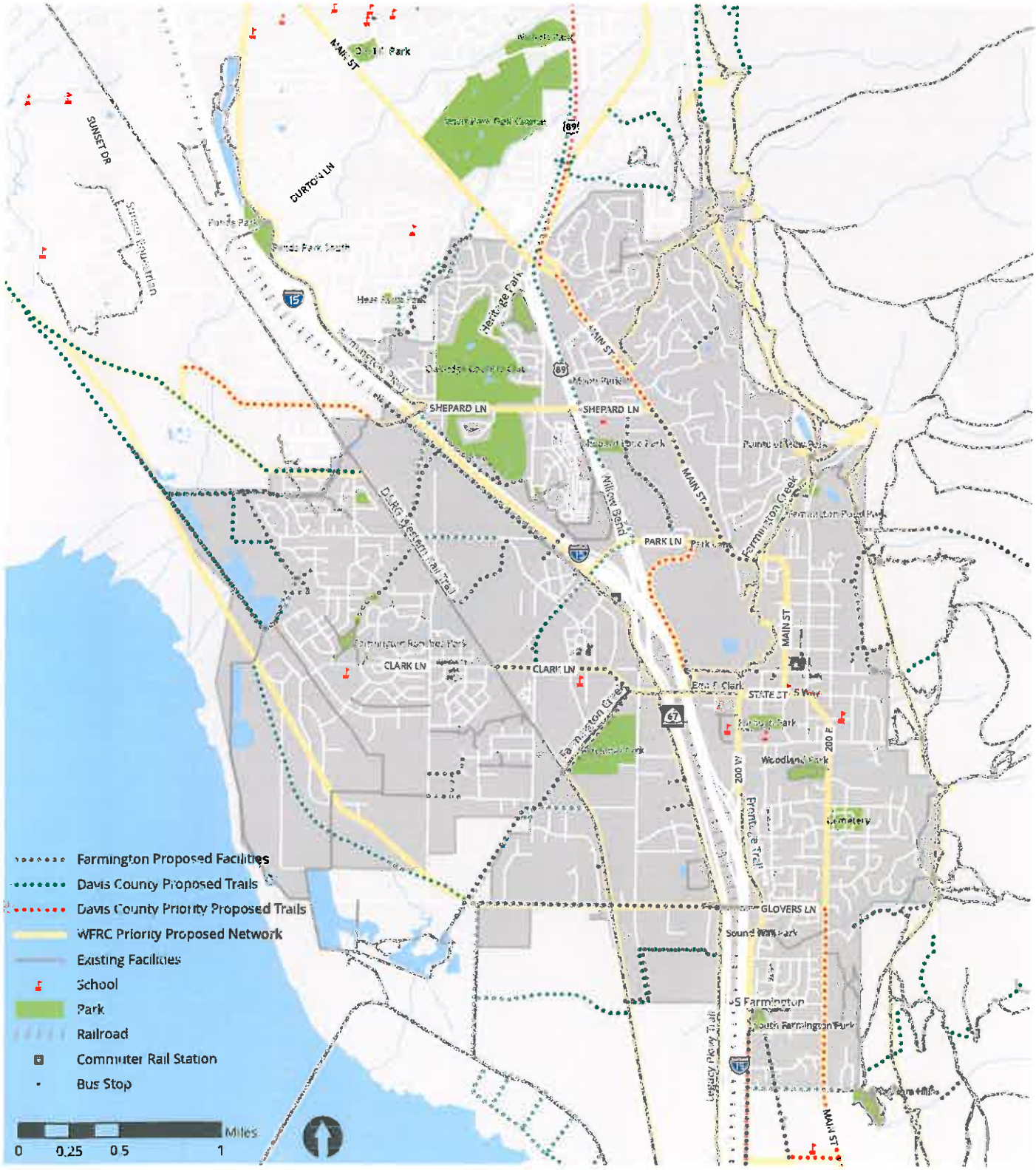
UTA FIRST MILE-LAST MILE STUDY

This goal of this study is to provide meaningful and comfortable connections to UTA FrontRunner and TRAX stations in order to make transit use easier and more accessible, especially to those without access to an automobile. Existing UTA strategies include shuttles, active transportation, wayfinding, car share, bike share (GREENbike), and on-board bicycle accommodations.

The study identified the walk access of the Farmington and Layton FrontRunner stations as "medium" (Figure 1.9). They classified in the "auto-dependent" stations group, or in other words, those with low to medium walk access, low walking and bicycling rates, and a large number of automobile parking spaces. Strategies to improve the walkability and bikeability to these "auto-dependent" stations include:

- Wayfinding and information
- Bicycle network improvements

Figure 1.8: Farmington Previously Planned Facilities Map



- Access connections
- Pedestrian network improvements
- Crossing treatments

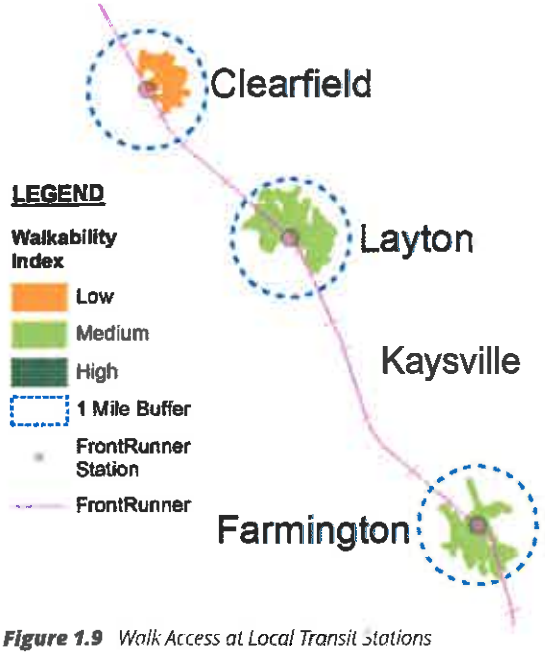


Figure 1.9 *Walk Access at Local Transit Stations*

Existing Codes & Policies

CITY CODE (EXCEPT TITLE 11)

Recreation, Arts, and Parks (RAP) Tax

In the November, 2014, municipal general election, a majority of Farmington voters approved a 0.10% local option sales and use tax on qualifying taxable transactions in the city that took effect on April 1, 2015. The tax will be effective for ten years (until March 31, 2025), and funds from the RAP Tax will fund a recreation center (currently under construction) and other recreational and cultural facilities and organizations within the community (Title 5)

Subdivision and Development Code

Sidewalks along major streets shall not be less than five feet wide. In major residential subdivisions where each lot has a frontage of at least 150' and an average minimum lot size of one acre, sidewalk improvements may be omitted at the discretion of the City Council and Planning Commission is adequate provisions have been made for pedestrian traffic (Title 12, Section 12-8-030).

Subdivision and Land Development Ordinance

The ordinance is a means of preserving open space as the city develops, especially on the perimeter of subdivisions and developments, where paths and parks can be built. It is a strategy to avoid having to buy right-of-way or property down the road and the improve connectivity throughout the city.

Developers pay a fee for the acquisition and development of park land. The Planning Commission may also require the dedication of land for park and recreation purposes in lieu of part of or all of the fee. The topography, location, and size of the land should be suitable for park or recreation uses, such as playgrounds, playfields, pedestrian or bicycle paths, or open space and wooded areas either developed or left in their natural state (Title 12, Section 12-7-060). Community facilities, such as parks, trails, and transportation facilities, shall be provided in subdivisions in accordance with the General Plan standards, this ordinance, and other ordinances and resolutions.

ZONING ORDINANCE (TITLE 11 OF THE CITY CODE)

Site Development Standards (Chapter 7)

This chapter of the zoning ordinance deals with site development standards, particularly establishing minimum standards for the review of development applications and design as they relate to sidewalks. Sidewalks must be included in all applications for construction dwellings, building additions or site modifications on a developed site, and all others uses on an undeveloped site (Sections 11-7-105, 11-7-106, and 11-7-107). Developers much dedicate all streets to the City, including sidewalk along the entire property line which abuts any public street. These sidewalks must comply with the minimum requirements for construction of public improvements established by Farmington City (Section 11-7-108).

Mixed-Use Districts (Chapter 18)

The objective of this chapter of the zoning ordinance is to "provide and encourage a compatible mix of uses,

rather than a separation of uses, that is consistent with the objectives of the Farmington City General Plan", including flexibility in design and uses in order to "promote a transit and pedestrian-oriented pattern of development" via a form-based code in which walkability is one of the principal goals (Section 11-18-101).

In the street type hierarchy in Table 1.3, pedestrian walkways include walkways and trails for pedestrians and bicycles only, which connect green spaces, residential areas, commercial nodes, and transit nodes.

The location and character of streets in these mixed-use districts are regulated by the street network map, which identifies street types and standards for each type that establish width, character, and use. The streets should be public places for multiple modes of travel, including pedestrians and bicyclists. The mixed-use zones are confined to the area east of the D&RG Western Rail Trail, west of I-15, north of Clark Lane (for the most part), and south of about 90 North.

"Open Space Districts (OS)" are intended for parks, open space, and trails throughout mixed-use districts, especially the Shepard Creek corridor. "Office Mixed Use Districts (OMU)" are intended to be primarily office and commercial that create an attractive pedestrian environment through a higher intensity of commercial uses. The "Transit Mixed Use District (TMU)" consists of Station Park and other land within proximity to the Farmington FrontRunner station and is developed so as to promote walkability and improve desirability of transit use.

Block sizes and connectivity are also addressed in this Chapter. Sidewalks are required on both sides of streets that also include motorized traffic. Also, corner curb radii are to be 28' with a 10' clear zone devoid of vertical obstructions. Bicycle parking is required to be placed at least on every block face for principal and promenade streets and include at least parking for three bicycles and a maximum capacity of seven bicycles each.

Development plan review standards are based partially on providing an interconnected transportation system

Table 1.3 *Mixed-Use District Street Classifications and Required Elements*

Street Type	Total Side Treatment Width	Sidewalk (public easement)	Park strip/tree grate	Bike Lane
Arterial	28-40'	6-10', both sides	8-10', both sides	5', both sides
Principal (Major Collector)	40'	10', both sides	10', both sides	5', both sides
Promenade (Minor Collector)	50'	20', both sides	5', both sides	5', both sides
Neighborhood (Local)	28-36'	6-8', both sides	8-10', both sides	No, but bike route designation
Rail Access (Local)	3-9'	3-8', both sides	0-3'	None
Alley	None	None	None	None
Pedestrian Walkway	20'	10' trail	5-, both sides	Trail

that accommodates all modes, including bicyclists and pedestrians, including providing attractive and safe pedestrian and bicycle connections to building entries, public sidewalks within parking lots and transit areas, and pedestrian amenities near transit facilities.

Off-Street Parking, Loading, and Access (Chapter 32)

This Chapter requires that all public parking areas shall provide spaces and areas compliant with the design and quantity established by the Americans with Disabilities Act (Section 11-32-107). No bicycle parking is required.

Existing Programs & Events

STUDENT NEIGHBORHOOD ACCESS PROGRAM (SNAP)

SNAP is a statewide program, part of the federal Safe Routes to School (SRTS) program administered through the Federal Highway Administration (FHWA). The goal of the program is to educate children about walking and biking to school safely and encouraging them to use these modes. The program also seeks to construct or improve walking and bicycling infrastructure near schools and associated homes. It provides additional resources for students, parents, teachers, and administrators, including tips, ideas, walking school bus apps, Walk n' Roll programs, crossing guard standards, activity books, and more.

Figure 1.10 *SNAP Map for Farmington Junior High*

Most elementary and junior high schools attended by children who live in Farmington have a SNAP plan for the area of the city that is served by that particular school. A SNAP plan is an online map that shows parents and students the safest way to get to school by walking or bicycling, crosswalks, signals, crossing guard locations, and student drop-off and pick-up areas. Viewmont and Davis High Schools are the only schools of any type attended by Farmington students that do not currently have SNAP plans.

WALK MORE IN FOUR

From August 31st to September 25th, 2015, students are invited to compete in the Walk More in Four 2015 competition that encourages them to walk and bike safely to school (or, if walking and biking to school are not possible because of distance, safely riding and walking in their neighborhoods) at least three days each week with the chance to win prizes and an overall statewide competition. The school with the highest percentage of students completing the challenge will be eligible for a $500 prize to be used by the school's Safety Committee and a traveling trophy awarded each year.

FARMINGTON TRAILS COMMITTEE

Farmington City and the Trails Committee have developed "Adopt-a-Trail" and Trail Chief programs that allow residents to become advocates and overseers for specific trails or trail segments. The volunteers, or Trail Chiefs, are in charge of monitoring their trail and providing or reporting maintenance needs. The collective group of Trail Chiefs is called the Friends of

Farmington Trails Committee (Photo: Farmington City website)

our Trails (F.O.O.T.) Patrol. Problems or issues detected by or reported to Adopt-a-Trail volunteers should be reported to Farmington City. Additionally, people who hike or mountain bike 15 or 30 miles of the 132 miles of finished trails in the Farmington trail network are given "Power Hiker" patches by the Trails Committee that depict the distance they hiked or mountain biked.

SOUTH DAVIS COMPOSITE (WOODS CROSS, BOUNTIFUL, VIEWMONT) HIGH SCHOOL AND FARMINGTON JUNIOR HIGH DEVELOPMENT MOUNTAIN BIKE TEAMS

The South Davis Composite mountain bike team, which includes students from Viewmont High School, is part of the Utah High School Cycling League and the Nation Interscholastic Cycling Association (NICA), organizations that develop mountain biking programs for student-athletes in Utah. Teams and races promote athletic as well as leadership skills. Mountain biking has been a club sport at the high school level in Utah since the 2012-13 school year.

Beginning in 2014, 7th and 8th graders at junior highs began racing in development teams. As of the beginning of the 2015-16 school year, more than 300 junior high athletes compete the day before the more than 1,000 high school athletes during several weekends in the fall. The Farmington Junior High Development Team is open to all interested students from other schools; Farmington Junior is the only junior high in Kaysville and Farmington with such a team.

South Davis Composite High School Mountain Bike Team (Photo: UtahMTB.com)

LEGACY RACEWAY BMX

Located near the D&RG Western Rail Trail, 1100 West, and about 200 South in Farmington, the Legacy Raceway BMX race track hosts bicycle motocross clinics, practices, races and related events regularly for all ages groups (normally from six years old and up). Races usually take place on Fridays, Saturdays, and Sundays.

FESTIVAL DAYS

In 2015, Farmington City hosted several events during Festival Days, held during the second week in July, which celebrated Farmington's history and heritage. These events included a kids' bike parade at Forbush Park, a family bike race at Station Park Village, and a 5K, 10K, and Flag Rock Run at City Hall.

NATIONAL TRAILS DAY

Similar to Kaysville, Farmington Parks and Recreation hosted a local celebration of National Trails Day in June 2015.

PEDESTRIAN SAFETY AWARENESS & GREEN RIBBON MONTH

September is Green Ribbon Month, a campaign that focuses on pedestrian safety, especially near schools. Davis County Safe Kids Coalition started Green Ribbon Month for pedestrian safety awareness in 1998 and has since expanded to schools throughout the state with more than 72,000 people participated in 2005. The goal of the awareness campaign is to display green ribbons on cars, at schools, on fences, etc., in order to promote protecting children while walking to school, especially in crosswalks and school zones. The pledge includes pedestrian safety assemblies, walkability audits, poster contests, decorating schools, driving slow in school zones and residential areas, and walking school buses. Green Ribbon Month concludes with International Walk to School Day, usually held during the first week in October.

UDOT SAFE SIDEWALK PROGRAM

Any sidewalk, pedestrian facility, or pedestrian safety devices that are located in urban areas and adjacent to a state highway or route will be included in all state highway engineering and planning projects. These projects also require a 25% local government match.

Attendees at the beginning of the public open house at the Kaysville Library

2: Public Involvement

In order to determine the needs of current and possible bicycling and walking users, multiple public outreach efforts were conducted in Farmington and Kaysville during the course of the development of this Plan in order to better understands the needs of people who live, work, and recreate here. In total, more than 1,500 people from both communities participated during the Plan. Suggestions made and discussions had during the public involvement process heavily influenced recommendations made throughout this plan.

Field Investigation Bike Ride

Several members of the project steering committee rode through Farmington and Kaysville on August 21, 2015, in order to ground-truth existing data and identify and discuss highlights and deficiencies in the overall walking and bicycling system.

Interactive Online Mapping Tool

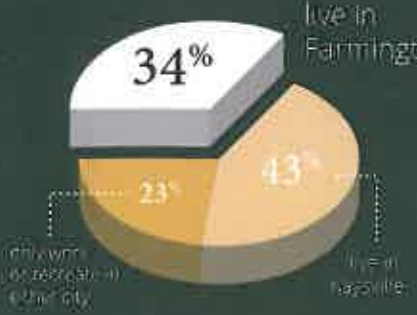
This tool, which allowed users to draw routes they liked or those they thought needed improvement, mark where their typical destinations are, and where they saw gaps in the system or barriers that discouraged them from walking and bicycling more, received responses from nearly 300 unique users. They drew 109 lines describing roads, paths, and sidewalks that they used and/or that needed improvement and 453 points that they identified as either destinations, gaps, or barriers. All responses identifying gaps and barriers can be seen in Figure 3.7 and destinations can be seen in Figure 3.8.

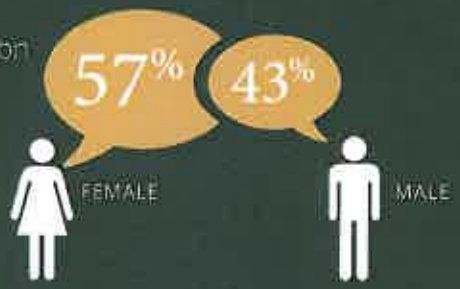
Online Public Survey

A 17-question online survey about bicycling and walking habits and preferences was conducted between August 15 and September 30, 2015. The survey was promoted in the City's newsletter delivered to each home at the beginning of September, in Facebook groups and on personal pages, and via email to stakeholders, City staff, survey respondents, and interested parties. 34% of the more than 1,000 respondents lived in Farmington, 43% in Kaysville, and the remainder worked or recreated in either or both.

Joint Community Survey Results for Farmington

1,023 Total number of survey respondents





36-45 YEAR OLDS

Most common age group (36%)

OVERALL WALKING & BIKING CONDITIONS

Walking and bicycling conditions are currently rated, on average, between fair and good

Respondents were interested most in walking & bicycling to


PARKS (78%)


TRAILS & PATHS (78%)


FRIENDS & FAMILY (51%)


SCHOOL (41%)


SHOPPING (34%)

The most common type of person is one that is **not comfortable in traffic and will only ride a bicycle on paths and quiet residential streets**

85% feel comfortable or very comfortable walking

NOT COMFORTABLE in traffic or on the road

COMFORTABLE in some traffic situations and in bike lanes

Top priorities for investment:

IMPROVE PATHS & TRAILS NETWORK
73%

ADD ON-STREET BIKEWAYS
52%

MORE SIDEWALKS, SHADE TREES & LANDSCAPING
45%

BETTER CROSSINGS
27%

ACCESS TO TRANSIT *(FrontRunner & Buses)*
25%

WALK & BIKE HABITS

Out of respondents with children:

21% have children who **do not** walk or bike to school or friend's houses

44% have kids who **always** walk or bike to school or friend's houses

35% have kids who **sometimes** walk or bike to school or friend's houses

Since 1969, the percentage of children walking or bicycling to school in the United States has dropped from 50% to 13%.

Public transit use is much higher when the trip begins with walking or biking

Lack of safe crossings, high motor vehicle speeds, and too much traffic were the most cited reasons that their kids did not walk and bike more.

ADDITIONAL COMMENTS

282 ADDITIONAL COMMENTS

By far, the number one recommendation is **making east-to-west connections safer and more abundant**, especially around Park Lane, FrontRunner, and Station Park

Public Open House

About 250 people attended the public open house on December 8, 2015, at the new Kaysville Library, where they learned about the Plan's purpose and the City's vision and goals for the future of walking and bicycling, and were encouraged to review and provide feedback on initial recommendations made by the project team, including consultants and Farmington and Kaysville staff. It was one of the best-attended open houses for a bicycling and walking plan in Utah, regardless of the size of the community.

The open house was advertised at grocery stores, library branches, on the City website and in the monthly citywide newsletter, through the Davis School District Peachjar mailing list received by all parents of students in Farmington, as well as through email to interested stakeholders and community members, on Facebook, and on other social media platforms. The open house was another opportunity, in addition to the survey and interactive mapping tool, for the public to draw desired routes and connections on maps, express wishes to the project team and City representatives, and shape walking and bicycling for the future in Farmington and Kaysville.

Some of the same, recurring themes from the survey and interactive map were evident in the open house as well, like improving bicycling and walking connections across I-15 and Highway 89; safety generally; access to and from Station Park and Farmington FrontRunner via Park Lane; bicycling and walking safety and comfort on and across 200 N (especially near I-15), Main St, and 200 E; maintenance, especially ridding trails of thorns and other weeds; and filling small gaps in the existing network with facilities comfortable enough for any user; and, providing comfortable facilities, including paths, separated bike lanes, and grade-separated crossings.

Open house attendees included residents of all ages, including this young group

Project team members spoke with the public, listened to concerns, and assisted them in drawing desired improvements on the maps provided

Attendees were greeted with bicycling and walking-themed treats as they left the open house

Runner and bicyclist on the South Frontage Road Trail near Glovers Lane

3: Existing System & Needs Analysis

This chapter discusses the existing system of shared-use paths, unpaved trails, bike lanes, and shared lanes/roadways in Farmington. It also includes an analysis of needs and gaps in the system; barriers to walking and bicycling; and crashes involving bicyclists and pedestrians, including the conditions that can contribute to crashes.

Farmington currently has more than 33 total miles of bikeways and shared-use facilities. Many more miles of bicycling and walking facilities are available to the east, in the foothills outside of the city, as well as to the south in Centerville and to the north in Kaysville (see map of existing system in Figure 3.3).

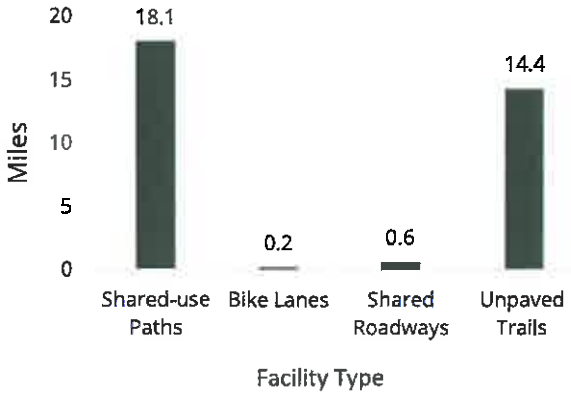


Figure 3.1 *Mileage of Existing Bikeways and Shared-use Facilities (Paths and Trails) in Farmington City Limits by Facility Type (Note: To date, Farmington and regional partners have invested primarily in off-street facilities like paths and trails, but not as much in on-street facilities)*

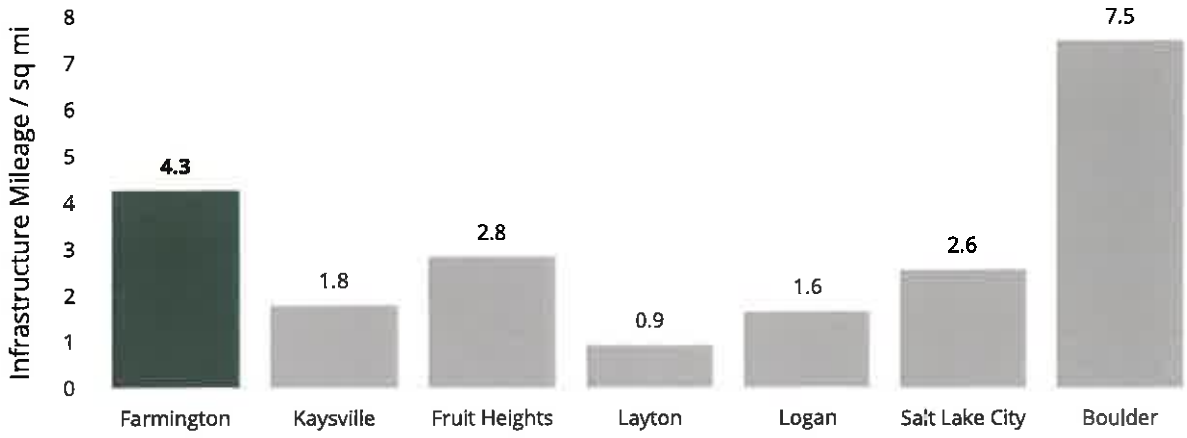


Figure 3.2 *Existing infrastructure density (total system mileage / square miles of incorporated city) in Farmington compared to other communities. Farmington's infrastructure density is higher than most cities in Utah and about half the density of Boulder, CO, one of the most bicycle friendly communities in the Western United States.*

Shared-Use Paths

There are more than 18 miles of paved shared-use paths in Farmington. These paths, sometimes called trails, are shared by bicyclists, pedestrians, runners, and other non-motorized modes. Shared-use paths are typically located in their own rights of way separated from roads, but can also be built adjacent to roads. Some of Farmington's notable paths include the D&RG Western Rail Trail and Legacy Parkway Trail.

The Denver & Rio Grande (D&RG) Western Rail Trail shared-use path in northwestern Farmington near Burke Ln

Unpaved Trails

There are about 14 miles of unpaved mountain biking and hiking trails inside Farmington city limits and many more miles outside of, yet still accessible from, the city. Unpaved trails can be dirt, gravel, crushed limestone, and other natural surfaces, and exist in separate rights of way for exclusive use by pedestrians, mountain bikers, and equestrians. Unpaved trails can be singletrack such as the Bonneville Shoreline Trail, or wider and more accessible soft-surface trails.

Unpaved trail in Woodland Park west of 200 East

Bike Lanes

This type of bikeway uses striping, symbols, and sometimes signage to assign space on the road to bicyclists. Bike lanes encourage predictable movements by both bicyclists and motorists by assigning each mode separate spaces. Farmington currently has a short, 0.23 mile section of bike lanes on both sides of the road on State Street between 400 West and 200 West south of Lagoon and west of Downtown.

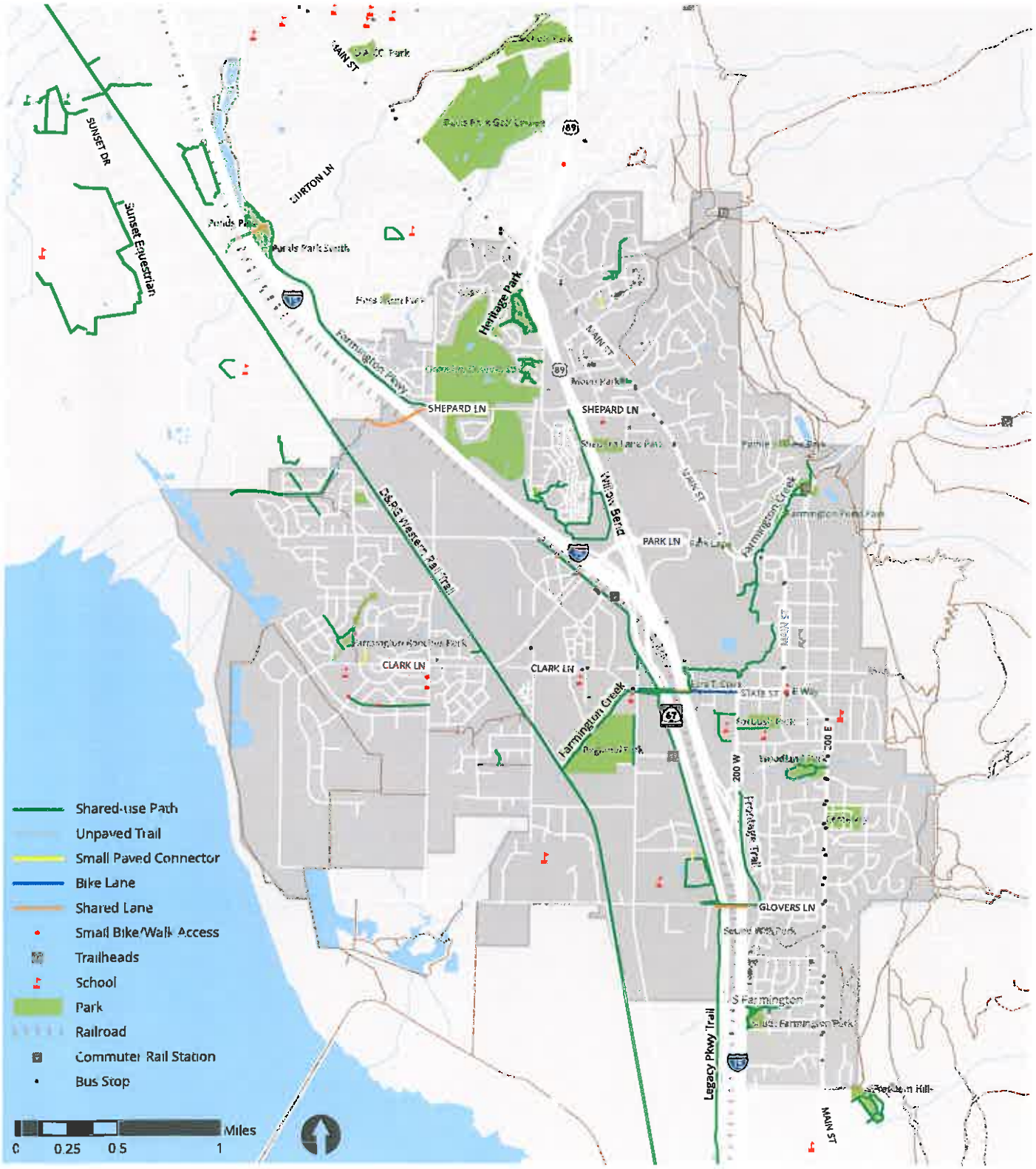
Bike lane on State Street at about 300 West

Shared Lanes/Roadways

Roadways that highlight the legal right of bicyclists to operate in the travel lane, either side by side or in single file depending on roadway conditions, are called shared roadways and can be identified by signage and/or pavement markings. Several of Farmington's I-15 overpasses have "Bicycles May Use Full Lane" signage that alert motorists that bicyclists may be sharing the travel lane due to constrained roadway width. There are 0.6 miles of signed shared roadways in Farmington, notably on State St/Clark Ln and Shepard Ln near I-15.

Shared lane marking and signage on Shepard Lane near I-15

Figure 3.3: Farmington Existing Bicycling & Walking Facilities Map



Crashes

Crash data is an important statistic in tracking and analyzing bicycle and pedestrian safety. The Utah Department of Transportation supplied data for all crashes in the state involving bicyclists or pedestrians since 2006.

NATIONAL AND STATEWIDE TRENDS

Overall traffic fatalities have decreased by 19% in Utah since 1975 and fatalities per 100 million miles traveled have decreased by 76%. This means that even though there are many more Utahns driving now than in 1975, the raw number of fatalities has actually decreased.[1]

In recent years, the number of bicyclist fatalities in crashes has also decreased overall in the United States (2014 was the only year that had a small and temporary uptick), particularly for bicyclists under 16 years old and those in larger cities and communities that have increased investment in bicycle facilities.[2]

Utah is the 14th safest place to walk (0.97 pedestrian fatalities per 100,000 population) according to a National Highway Traffic Safety Administration (NHTSA) report about traffic safety trends in 2013.[3] Nationally, pedestrian crash and fatality rates have decreased dramatically as walking rates have increased.[4]

CRASH LOCATIONS

As seen in Figure 3.5, crashes of any kind, but particularly those causing more serious injury, are clustered around state and interstate highways like Main St and 200 East; intersections; and higher speed, wider roads, like Hwy 89 and I-15. Even though fewer total crashes have occurred in Farmington than in Kaysville, for example, they tend to be more often fatal and incapacitating crashes than in Kaysville. All serious injuries or fatalities have stemmed from pedestrian crashes.

FACTORS CONTRIBUTING TO HIGH FREQUENCY

There are several factors in traffic safety data that identify potential causes or influences in pedestrian and bicyclist crashes. According to the NHTSA, these

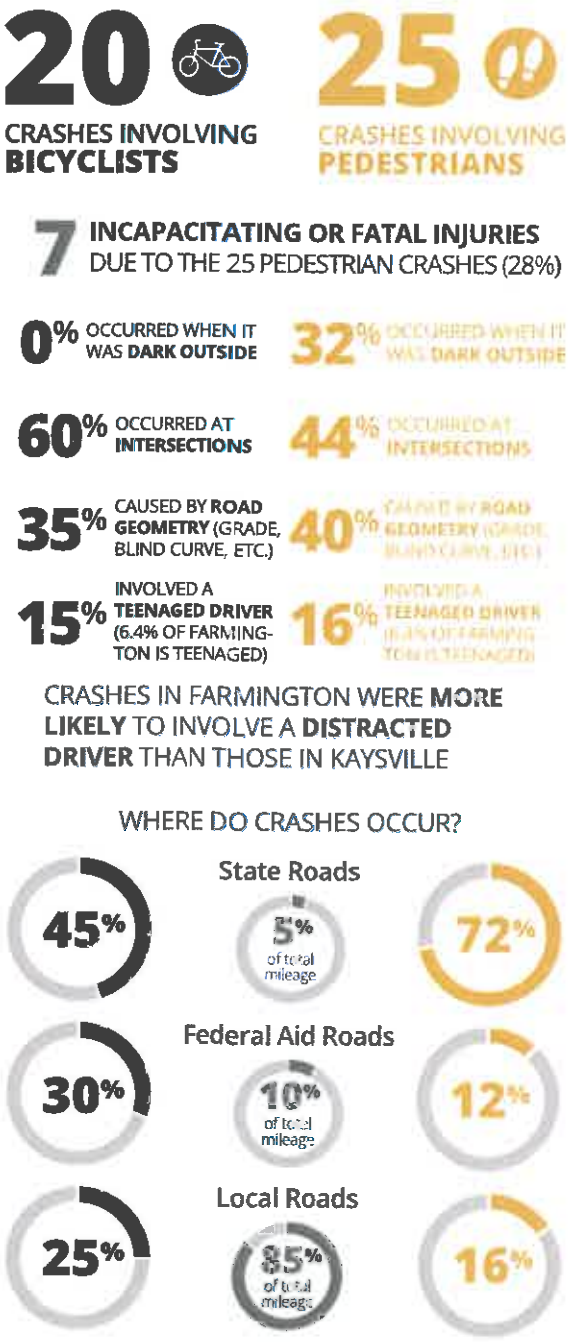


Figure 3.4 *Graphic analysis of crashes involving bicyclists and pedestrians in Farmington (2006-2015) (Data: UDOT). Even though there were 45 bicyclist and pedestrian-involved crashes between 2006 and 2015, there were more than 4,000 motorist-only crashes. The purpose of this analysis is not to highlight the risk of riding or walking. Rather, it is to identify the places and factors that contributed to crashes in an effort to remedy them.*

factors include (in order) failure to yield right of way (by either party), improperly in roadway, not visible, improper crossing of roadway or intersection, under

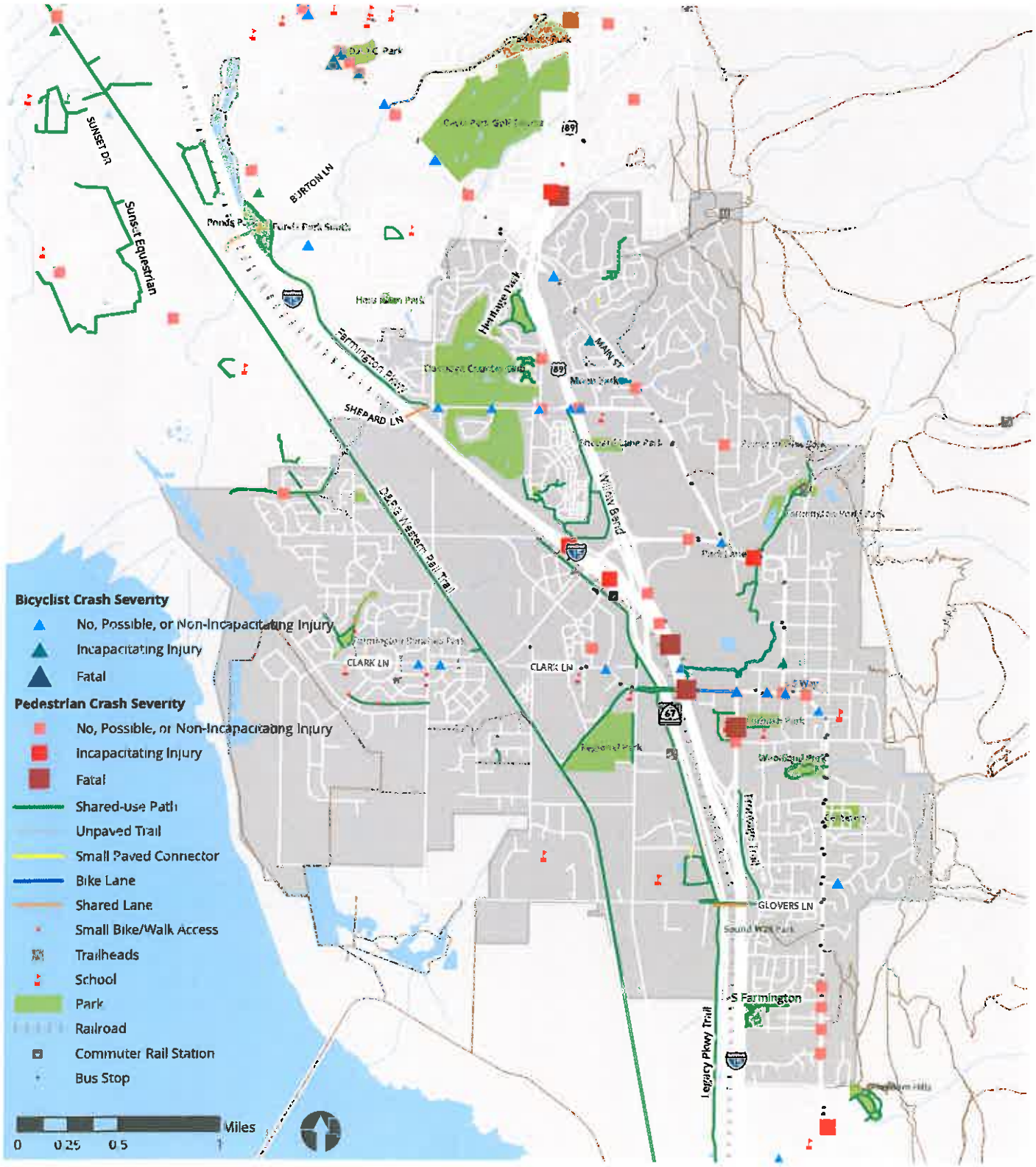
1 *Traffic Safety Facts 2013*. 2015. Washington, DC: National Highway Traffic Safety Administration.

2 Ibid.

3 Ibid.

4 "Benchmarking", 85.

Figure 3.5: Farmington Crash and Safety Analysis Map



the influence, and darting or running into the road.[5] Trends specific to Farmington are described in these sections.

Alcohol & Speed

Although 37% of traffic fatalities in Utah involved a driver with a blood alcohol concentration (BAC) above the legal limit (.08)[6], it was not a trend in Farmington's data.

Additionally, even though 34% of traffic fatalities in Utah were speeding-related, excessive speed was not a significant trend in the crashes in Farmington.

Needs, Gaps, Opportunities, & Constraints

EXISTING SYSTEM GAPS & NEEDS

Although the existing bicycling and walking system in Farmington is quite extensive, gaps and needs still exist (Figure 3.8), many of which will be addressed in this plan, thereby improving connectivity and usability of on and off-street facilities.

OPPORTUNITIES & CONSTRAINTS

Opportunities identified in Figure 3.8 differ from gaps because they are opportunities for development of facilities (i.e. an easement through a property or between two properties, parks, available and unused right of way that could be used for a new facility) that are not necessarily missing segments. Constraints can be natural features (like rivers, streams, and mountains or steep grades), freeways, other busy roads, and railroad tracks. Many of the constraints in Figure 3.8 were identified by the public as barriers during this plan's public involvement process as well as in the Utah Travel Study's Barriers and Hazards Survey.

Demand, Origin, & Destination Analysis

While Figure 3.8 shows desired routes and existing gaps, opportunities, and other location-specific public comments about improvements that can or should be made, Figure 3.9 shows where the major destinations are located in Farmington, destinations that draw or could potentially draw the most amount of people walking traffic. Improving connectivity to and within these destinations is a priority.

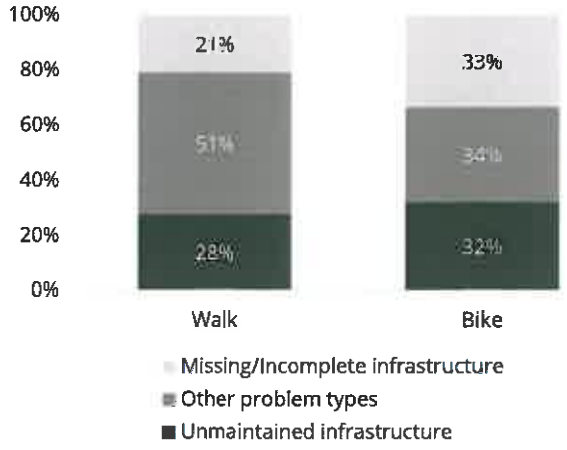


Figure 3.6 *Types of walking and bicycling barriers identified in the Utah Travel Study (Note: Responses were very similar to the type of barriers identified in the interactive mapping tool (Ch 2))*

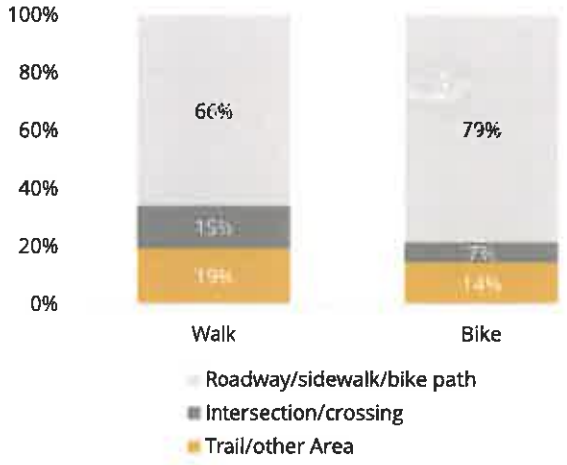


Figure 3.7 *Location of walking and bicycling barriers identified in the Utah Travel Study. Most barriers were located on a roadway, sidewalk, or path*

The public suggested crossings on 200 E near bus stops

5 *Traffic*. 2015.

6 *Traffic*. 2015.

Figure 3.8: Farmington Needs, Gaps, Opportunities, & Constraints Map

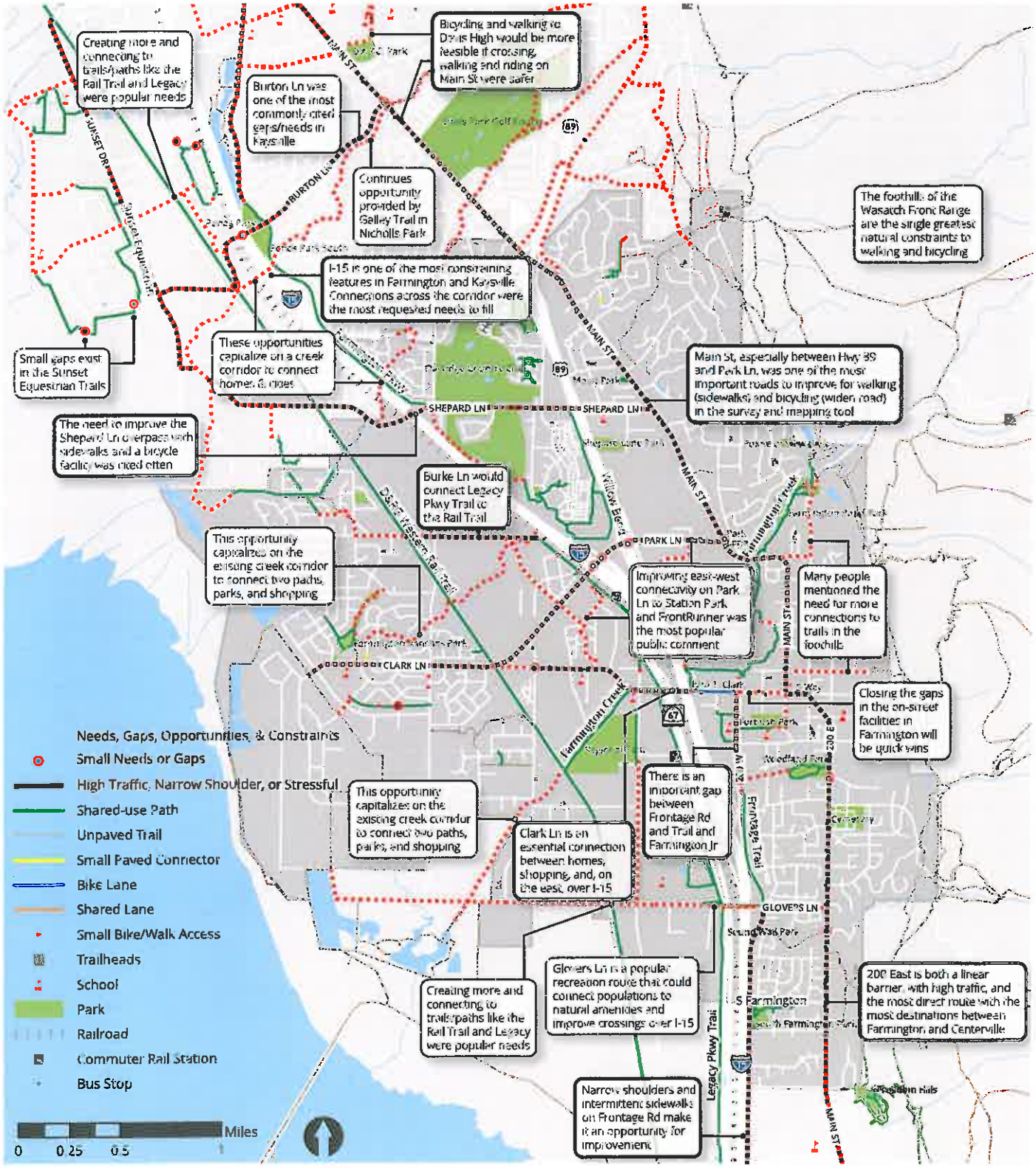
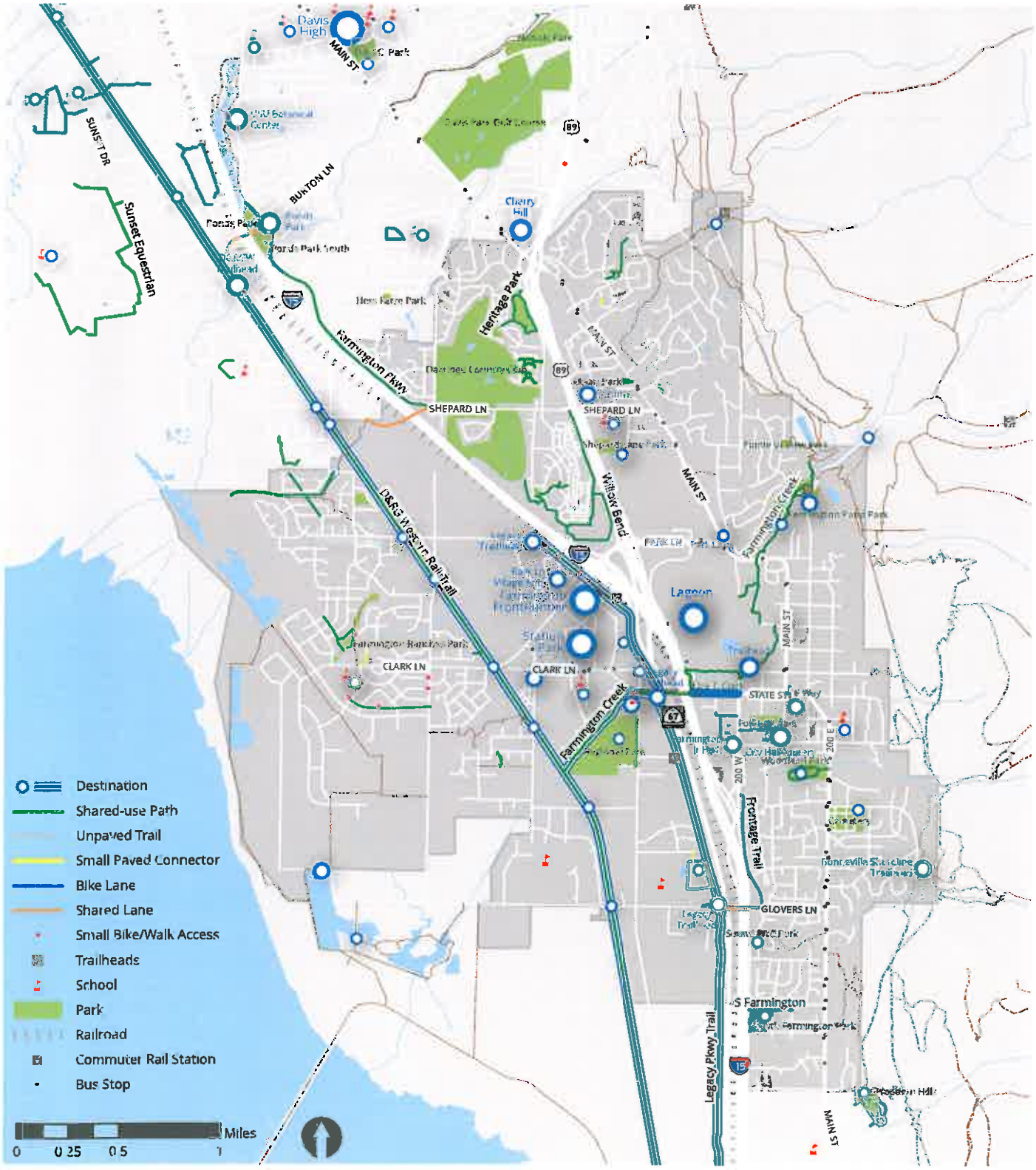


Figure 3.9: Farmington Demand, Origin, & Destination Map



Recommended improvements included in this chapter will build on the existing trail and path network

4: Recommended Improvements

Introduction

People who walk and ride bicycles vary in their physical abilities, experience levels, and level of comfort near traffic much more so than drivers of motor vehicles do. Well-designed streets and dedicated, off-street facilities should be planned and implemented in a way that accommodates these different types of people walking and riding. Many streets, such as low speed, low volume local streets, may not need special facilities to accommodate active transportation users, while others with higher volumes and speeds may require significant infrastructure investments.

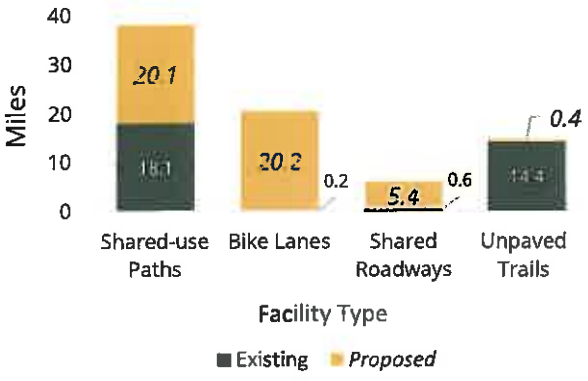


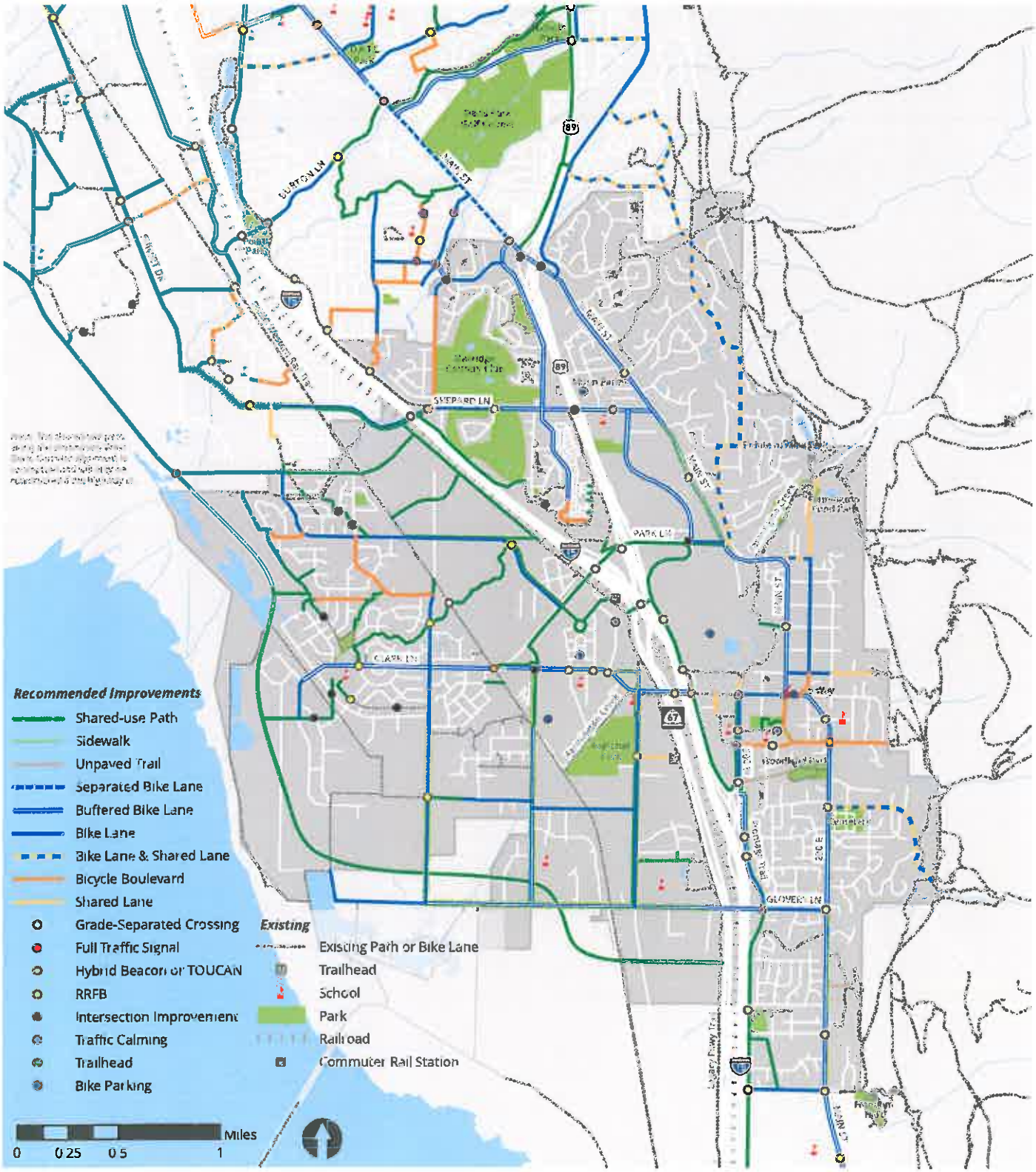
Figure 4.1 *Mileage of Existing and Proposed Facilities in Farmington City Limits by Facility Group Type (Note: To date, Farmington and regional partners have invested primarily in off-street facilities like paths and trails, but not as much in on-street facilities)*

This plan's proposed active transportation system seeks to provide people in Farmington viable, convenient, safe, and healthy active transportation choices. The proposed system also enhances regional connectivity by linking Farmington to other communities.

Development of Recommended Improvements

Community goals, identity, and input were the primary considerations in the development of the recommended improvements in this chapter and in the plan overall. Input from both Kaysville City and Farmington City, the Utah Department of Transportation, and the project steering committee also offered clarification on project statuses, costs, implementation criteria, and future plans. Additional coordination will be needed to implement facilities in corridors owned by outside agencies or private land owners, along boundaries with adjacent cities, and near schools. Additionally, the recommendations in this plan represent a master planning level of detail. They are subject to change and refinement as conditions and development patterns change and as individual projects are implemented. Complex projects, such as recommended bicycle and pedestrian crossings over I-15, will require feasibility studies.

Figure 4.2: Farmington Recommended Improvements Map



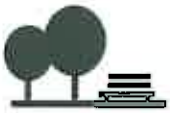
Public Survey Respondents' Top Priorities for Investment

IMPROVE PATHS & TRAILS NETWORK

73%

ADD ON-STREET BIKEWAYS

52%



MORE SIDEWALKS, SHADE TREES & LANDSCAPING

45%

BETTER CROSSINGS

27%

ACCESS TO TRANSIT *(Frontrunner & Buses)*

25%

PROJECT GOALS

The following plan goals (identified at the beginning of the plan and repeated here) were instrumental in developing the recommendations in this chapter:

- Increase economic development opportunities for current and future residents, business owners, and stakeholders
- Plan, design, and maintain a walking and bicycling network that is visible, attractive, and convenient for all users, regardless of age or ability, especially commuters and driving-age students
- Unite the east and west, especially across US-89, I-15, and Legacy Parkway, with bicycle and pedestrian improvements that are safe enough to feel comfortable riding with a young child
- Improve overall connectivity and accessibility for bicyclists and pedestrians, including access to and from neighborhoods, services, public facilities, schools, shopping, food, entertainment, and transit
- Improve the safety and livability of the community by addressing and fixing deficiencies in on-street corridors and intersections
- Ensure equitable access so that all children can safely walk and bike to school

COMMUNITY PRIORITIES

Priorities and themes gleaned from the thousands of residents from both cities who participated in the public involvement process, summarized in Chapter 2, that are not included in the top priorities for investment included above, were a driving force behind the plan's recommendations:

Safe and comfortable crossings of I-15 and other major transportation arteries

Safe access to and from schools that will encourage students to walk and ride a bike instead of being dropped off in cars or busses

Improve comfort along and across major arterials like Main Street

Connect homes to popular destinations

LOW-STRESS BICYCLE AND PEDESTRIAN FACILITIES

Low stress bicycle and pedestrian facilities, like shared-use paths, trails, separated bike lanes, and bicycle boulevards, appeal to a more diverse cross section of the public than conventional, on-street, paint-only facilities like bike lanes. They are low-stress because of increased physical protection or separation from traffic; use of low volume, low speed streets (bicycle boulevards); and/or directional wayfinding signage that directs users to destinations and specific routes like interstate highway signage does for automobiles.

A majority of the public would like to walk or ride bicycles more but are discouraged from doing so by perceived safety concerns, lack of facilities, or a lack of knowledge about where the appropriate facilities are located. Surveys nationally show that 50-60% of people say they would ride a bicycle more (or start riding) if they had access to facilities that provided more separation from traffic, lower traffic speeds, and/or lower traffic

volumes. Public input indicated a strong demand for more paths and trails, and on-street facilities that provided that same level of comfort but with greater connectivity to destinations.

Separated or traffic-calmed on-street facilities like separated bike lanes or bicycle boulevards, respectively, also create a better pedestrian experience by reducing traffic speeds or, in the case of separated bike lanes, increasing the distance and physical separation between sidewalks and active motor vehicle travel lanes.

Additionally, evidence has shown that increasing the number of bicyclists on the road improves safety for everyone. Cities with high bicycling rates tend to have lower crash rates.[1]

The most common type of person surveyed in Kaysville and Farmington (33%) is one that is **not comfortable in traffic and will only ride a bicycle on paths and quiet residential streets**.

1 Marshall, W., and N. Garrick, 2011 - Evidence on why bike-friendly cities are safer for all road users, Environmental Practice, 13, 1

Recommendation Categories

Overall recommendations were classified into three categories:

- **Off-street** (shared-use paths, unpaved trails, and sidewalks)
- **Spot improvements** (intersection and crossing improvements, signals and beacons, grade-separated crossings, traffic calming, end-of-trip facilities)
- **On-street** (bike lanes, buffered bike lanes, separated bike lanes, and bicycle boulevards)

Although brief descriptions and graphics for each recommended facility type are included in this chapter, more specific guidelines on location selection, widths, implementation, and design considerations are found in *Appendix A: Design Guidelines.*

Off-Street Recommendations

SHARED-USE PATHS

Shared-use paths, as discussed in Chapter 3, are facilities separated or buffered from roadways for use by bicyclists, pedestrians, and other non-motorized users (i.e. Legacy Pkwy Trail, D&RGW Rail Trail). They are frequently found in separate rights-of-way along railroads, utility corridors, parks, and waterways, but can also exist within street or highway rights-of-way with adequate separation (called sidepaths). Due to their proximity to traffic, this latter type require additional safety considerations, especially at intersections and driveways.

The Denver & Rio Grande Western (D&RGW) Rail Trail is popular with people walking, running, and riding bicycles, especially families (Photo: Shaunna Burbidge)

West Davis Corridor

The establishment of a new highway on the west side of Davis County, known as the West Davis Corridor, beginning at Glovers Lane in Farmington, is not guaranteed. However, recommendation of a regional shared-use path within the highway right-of-way, like Legacy Parkway Trail, is within this plan.

Years ago, initial conversations between cities and UDOT produced a less than hopeful outlook for including the path along with highway construction. However, most of the previous concerns over each City maintaining their own section have since been alleviated due to their experience maintaining the Legacy Parkway Trail and the D&RGW Rail Trail.

If the West Davis Corridor project does not move forward and if Davis County cities do not implement a stand-alone path, linear and spot recommendations pertaining to the corridor should be reconsidered.

UNPAVED TRAILS

Unpaved trails (dirt, gravel, crushed limestone) are completely separated rights-of-way for exclusive use by bicyclists, hikers, pedestrians and, in some cases, equestrian uses. Unpaved trails can take the form of singletrack trails like the Bonneville Shoreline Trail, or wider, more accessible and multi-modal soft-surface trails.

SIDEWALKS

Although not all missing sidewalks were identified as future improvement projects, sidewalks, especially near schools, identified by the public, each City, and the project steering committee are included in the recommendations of this plan.

Spot Improvements

Many of the recommended improvements in this plan are classified as spot improvements, or recommended fixes specific to one location, like a traffic signal, crosswalk, curb ramp, roundabout improvement, bridge, or tunnel. These improvements will refine the existing system as well as help users navigate the proposed system more easily.

GRADE-SEPARATED CROSSINGS

Tunnels

Tunnels, or undercrossings, are grade-separated crossings for bicyclists and pedestrians, especially useful when crossing streets that have high volumes and/or high speeds. They are more easily implemented when the street(s) to cross are at a higher elevation than the facility going under. Special considerations for cost-benefit, lighting, safety, and topography need to be considered when evaluating potential use of this improvement type.

Bridges

Bicycle and pedestrian bridges, or overcrossings, provide critical non-motorized system links by joining areas separated by barriers such as deep canyons, waterways or, in many cases in Farmington, major

A grade-separated undercrossing in Logan, Utah that uses the existing slope and riverbed to pass under a roadway

New bridges (overcrossings) should accommodate pedestrians and bicyclists, both on the structure and on the approaches

transportation corridors. Improving the existing bridges or constructing new crossings over I-15 was the most common requested improvement during this planning process.

FULL SIGNALS

Full signals, or signalized intersections, control competing flows of traffic from multiple legs of an intersection. They can be placed at road intersections, pedestrian crossings, and other locations. Full signals alternate right of way between conflicting directions of traffic and user types. Not all full signal recommendations may be warranted. Often, improvements for bicyclists and pedestrians cannot be measured due to lack of use without a safe or accommodating facility.

BEACONS

Hybrid Beacons

A hybrid beacon, or High-intensity Activated CrossWalK (HAWK), consists of a major-street-facing signal head with two red lenses above a single yellow lens. Hybrid beacons were developed specifically to enhance pedestrian and/or bicyclist crossings of major streets in mid-block locations and at minor intersections where side street volumes do not support installation of a conventional traffic signal. It may also be beneficial to consider turning restrictions or other geometric changes.

TOUCANs

TOUCANs are similar to hybrid beacons as they pertain to use by bicyclists and pedestrians and are primarily used at intersections. The signal head facing major street traffic looks and functions like a full traffic signal head. Separate pedestrian and bicycle signal heads facing the cross street allow different indications for different users.

Rapid Rectangular Rapid Flashing Beacons (RRFBs)

A Rectangular Rapid Flashing Beacon, or RRFB, is a user-actuated, amber flashing light system that supplements warning signs at un-signalized intersections or mid-block crosswalks. The beacons can be actuated either manually by a push-button or passively through detection.

Hybrid beacon, or HAWK

A TOUCAN beacon at the north entrance to Liberty Park in Salt Lake City. The TOUCAN was combined with a right-in, right-out treatment for motor vehicles, allowing bicyclists and pedestrians to enter and exit the park on 600 E while avoiding attraction of non-local traffic into surrounding neighborhoods.

Rapid Rectangular Flashing Beacons (RRFBs) in Ogden, Utah

RRFBs use an irregular (rapid) flashing pattern and can be installed on either two-lane or multi-lane roadways (but should generally not be used where pedestrians cross more than two lanes of traffic without a refuge; additional guidance on where they are appropriate is found in *Appendix A: Design Guidelines*).

RRFBs are the most common recommended spot improvement facility type in this plan. They are relatively low cost, can be used to alert drivers to yield to bicyclists and pedestrians when they have the right-of-way crossing a road, and have been shown to improve driver yielding compliance up to 95% in most locations.

Roundabout improvements include curb ramps, marked, high visibility crosswalks, signage, and channelizers

Curb extensions, shown here in a residential Knysville neighborhood, shorten crossing distances for pedestrians and can calm traffic as well without reducing roadway capacity (Photo: Shaunna Burbidge)

INTERSECTION IMPROVEMENTS

General Improvements

Some recommended intersection improvements are general improvements like reduce turn radii in order to lower turning vehicle speeds, improve pedestrian comfort, narrow a crossing, or improve signal timing.

Roundabout Improvements

In single lane roundabouts, it is important to indicate right-of-way, priority, and other circulation rules to motorists, bicyclists, and pedestrians using appropriately designed signage, pavement markings, and geometric design elements like channelizers, bike lane bypasses, and shared-use paths.

Crosswalks

Some of the intersection improvement recommendations were as simple as adding a crosswalk where they were missing or upgrading an existing crosswalk to have higher visibility.

TRAFFIC CALMING

Curb Extensions

Curb extensions visually and physically narrow the street creating shorter and safer crossings for pedestrians and bicyclists, increase predictability for all users, and potentially slow motor vehicles at crossings. They can be installed mid-block or at intersections.

Curb extensions can be used as standalone traffic calming or in conjunction with other treatments in this chapter. One advantage of curb extensions at signalized intersections is that they reduce the time needed for pedestrian crossings and can thereby increase intersection capacity while reducing wait times for all users. Where curb extensions are installed without a designated pedestrian crossing, like at the beginning of a school zone, they can also act as an extension of the public space on the adjacent sidewalk.

Median Refuge Islands

A median refuge island is located in the middle of the roadway, usually in the center turn lane, for bicyclists and pedestrians to use when crossing a street. Median refuge islands also provide added comfort and should be designed to direct users to see oncoming traffic

before crossing the remainder of the road. They reduce crossing distances, allow staged crossing of the roadway, and improve visibility of bicyclists and pedestrians crossing the roadway.

TRAILHEADS

In this plan, trailheads were only recommended along paved, shared-use paths. Trailheads can be sited at regular intervals along popular, regional shared-use paths in order to increase access and the attractiveness of the path. Trailheads can offer parking areas for those who want to use the path but are not able to or are uncomfortable riding or walking from their home. Other trailhead elements can include restrooms, water, signage, interpretive centers, or other amenities.

BICYCLE PARKING

Secure end-of-trip accommodations, like bike parking, encourage people to travel by bicycle. Some location-specific bicycle parking recommendations are included in the recommendations map. In addition to these, Farmington City should consider implementing a bicycle parking program outlined later in this chapter.

On-Street Bikeway Recommendations

This section outlines how recommended, on-street bikeways will improve the connectivity to and comfort of Farmington's existing and proposed facilities and destinations. In the online survey, the public identified their desire for their City to have more on-street facilities as a desired compliment to the existing off-street system and neighborhood streets.

Traditional on-street bikeways, like bike lanes, have typically served more experienced bicyclists. However, several of the facility types proposed in this plan, like bicycle boulevards and separated bike lanes, will cater to people of all ages and abilities who want to ride a bicycle.

RETROFITTING EXISTING STREETS FOR ON-STREET BIKEWAYS

Many streets are characterized by conditions (i.e. high vehicle speeds and/or volumes) for which dedicated on-street bikeways are the most appropriate facility to accommodate people on bicycles.

Median refuge island near Snow Horse Elementary School (Photo: Shaunna Burbidge)

Bicycle parking at the Farmington library branch

Much of the guidance provided in this section focuses on effectively reallocating existing street space through striping modifications without the need for widening. Ideally, space for bicyclists could be provided without reducing roadway or parking capacity, however it is often necessary to balance the needs of multiple user groups, especially in terms of safety.

Three main strategies have been proposed to accommodate bikeways on Farmington streets, though many recommendations are possible without any of these strategies:

Roadway Widening

In the absence of curb and gutter, shoulder widening presents a viable option for incorporating dedicated bikeways into an existing street. Where widening is already planned, ensure that recommended bicycle and pedestrian facilities are incorporated into the design.

Lane Narrowing or Reductions

Many streets in Farmington have 12-13' wide travel lanes, wider than specifications prescribed in national roadway design standards. Maintaining lanes as wide as these means that, in some cases, there is not space left on the roadway to implement bicycle facilities. Most national standards allow for the use of 10' or 11' lanes, and the latter width was used throughout the recommendations process.

Parking Reduction

Bike lanes can replace one or more on-street parking lanes on streets where excess parking exists (like where on-street parking is adjacent to redundant off-street lots) and/or the importance of bike lanes outweighs parking needs (like where homes back up to a road and where there are no fronting uses).

In some cases, parking may be needed on only one side to meet demand. Eliminating or reducing on-street parking also improves sight distance for bicyclists in bike lanes and for motorists on side streets and driveways.

SEPARATED, OR PROTECTED, BIKE LANES

Separated bike lanes are protected from traffic by a physical barrier of some kind and are also distinct from the sidewalk. Some separated bike lanes are at street level, while others are raised. There are many different types of physical separation that can be used for separated bike lanes: planters, raised curbs, parking, stationary or flexible bollards, and other streetscape elements. The applicability and feasibility of different types of separation depend on traffic volumes, speeds, driveway and cross street frequency, presence and type of on-street parking, maintenance capacity, and pedestrian volumes. Separated bike lanes can be configured for either one-way or two-way travel.

BUFFERED BIKE LANES

Buffered bicycle lanes add a painted buffer to a conventional bike lane (described below) but do not have the physical buffer or separation of a separated bike lane. The painted buffer can provide additional space between the bike lane and the adjacent travel lane and/or parking lane, providing a more comfortable experience for bicyclists. In some cases, buffered bike lanes are an effective tool to discourage motorists from driving or parking in a bike lane that would otherwise be excessively wide, like where the bike lane has replaced a parking lane or a wide shoulder.

A separated bike lane in suburban Boulder, Colorado using posts & concrete curb stops as a physical barrier

Buffered bike lanes have a painted buffer on the travel lane and/or parking lane side, based on volumes, speeds, and parking turnover

BIKE LANES

A bike lane provides a striped lane with bicycle pavement markings and optional signage for one-way travel by bicyclists on the street. Many of the bike lane recommendations in this plan will occur in conjunction

Bike lanes are delineated from the adjacent travel lane by a painted line parallel to the lane

with pavement resurfacing or roadway reconstruction, while others can be implemented immediately.

BICYCLE BOULEVARDS

Bicycle boulevards are naturally or artificially-created low-volume, low-speed streets that enhance comfort for bicyclists as well as residents and pedestrians by using a variety of treatments, such as signage, pavement markings, traffic calming, and/or traffic diversion and intersection modifications.

Bicycle boulevards ensure that traffic volumes and speeds remain at levels that do not compromise bicycle or pedestrian comfort. Many of the improvements intended for bicyclists are also advantageous for pedestrians, schools, and homeowners. Bicycle boulevards create calmer traffic conditions and have been shown to have a positive impact on property values.[2] Bicycle boulevards also often create natural walking corridors and more pleasant streets.

Bicycle boulevard treatments include traffic diversion, calming and speed reduction, and wayfinding signage, among others

Specific calming techniques and intersections are not included in the recommendations maps or spot improvements data as they will depend on circumstances and existing conditions at each intersection. Some intersections may not need any modifications to be comfortable for use by people on bikes. Typically, local streets with vehicle speeds at or below 25 miles per hour and vehicle volumes at or below 3,000 vehicles per day (with 1,500 vehicles per day preferred) are the most appropriate for bicycle boulevards.

SHARED LANE

Though not technically a facility type, shared lanes, or shared roadways, are often recommended on low speed corridors where bicycle facilities requiring a dedicated lane may not be feasible or warranted and where bicyclist speeds will likely mean that they will be using the travel lane. Installing shared lane markings, or sharrows, will better link other facility recommendations and create a more cohesive network.

Cost Estimates

Active transportation facilities can vary considerably in cost and as such the costs shown in Table 4.1 provide a "middle of the road" estimate. For example, providing a bike lane on a street could be a simple as adding a single white line and periodic stenciling if the outside travel lane is wide enough. Streets that need complete restriping to accommodate a bike lane would be considerably more, while streets that are already being resurfaced would reduce the marginal cost of the bike lane to a negligible percentage of the project. Similarly, spot improvements can vary in complexity and quality depending on the individual site conditions. More detailed, project-specific cost estimates included in *Appendix B: Project Information*.

2 Rice, E., 2008 - Valuing Bike Boulevards in Portland Through Hedonic Regression, USP 570 Analytical Term Paper

Table 4.1 *Estimated Facility Type Cost Estimates Each or Per Mile (Center Line), and Installations/Miles Per $100,000 (Center Line)*

	Cost Each or Per Mile (Center Line)	Units/Miles per $100,000
Shared-Use Path	$250,000-$1,000,000	0.1-0.4 miles
Unpaved Trails	$65,000	1.5 miles
Sidewalks	$400,000	.25 miles
Grade-Separated Crossings	$200,000-$7,000,000	Varies
Full Signals	$165,000	0.6 signals
Hybrid Beacons	$77,000	1.3 beacons
Toucans	$165,000	0.6 Toucans
RRFBs	$22,000	4.5 beacons
Intersection Improvements	Varies	Varies
Traffic Calming	Varies	Varies
Trailheads	$75,000	1.3 trailheads
Bicycle Parking	$200-$5,000	20-500 parking areas
Separated Bike Lanes	$500,000	0.2 miles
Buffered Bike Lanes	$10,000-$18,000	5-10 miles
Bike Lanes	$4,000-$7,000	15-25 miles
Bicycle Boulevards	$14,000	7 miles
Shared Lanes	$7,000	14 miles

Policy, Land Use, or System-Wide Recommendations

One of the goals of Wasatch Front Regional Council's Transportation and Land Use Connections (TLC) grant program, which helped to fund this and Farmington's active transportation plans, is to encourage and provide resources to local communities to "integrate their land use and regional transportation plans by proactively addressing anticipated growth" in order to "create liveable and vibrant communities."

Many of the non-infrastructure, policy, and land use recommendations in this section support that goal. The City should seek additional ways to not only retrofit their existing street and path networks to work better for bicyclists and pedestrians, but also to modify existing and introduce new land use policies into city codes, development standards, plat approval processes, and impact fees. Doing so will foster development that inherently prioritizes walking and bicycling as normal, viable, safe, and comfortable forms of transportation and recreation.

POLICY AND LAND USE RECOMMENDATIONS

Wasatch Choice 2040 Tools

The Wasatch Front Regional Council offers many tools to their constituent communities to make development and refinement of some of this plan's recommended land use and other policies easier. The following descriptions are from WFRC's online Wasatch Choice 2040 (WC2040) toolbox.

Envisioning Centers. A method to utilize the WC2040 toolbox in a dialogue with residents

Envision Tomorrow Plus. A scenario planning software, allowing communities to better visualize results of different policies

Form-Based Code. Provides a model code document and a manual for cities wishing to modify their local codes

Housing & Opportunity Assessment. Helps cities understand impediments and opportunities for housing equity

Implementing Centers. Methods and strategies to finance transit-oriented development infrastructure

Complete Streets. An approach to ensure that all users are considered with each street investment

Complete Streets Policy or Ordinance

Farmington should consider adopting a Complete Streets approach, policy, or ordinance. Complete Streets does not mean that every street in Farmington has to perfectly accommodate all transportation modes, ages, and abilities. Instead, an approach, policy, or ordinance will ensure, with differing degrees of rigidity, that, at the least, all users are considered with each opportunity for change and investment.

Many jurisdictions around the country have adopted Complete Streets policies and they can be used as model starting point. A Complete Streets policy is one way to institutionalize the goals of this plan within the City.

A "complete street" in Portland, Oregon, where bike lanes, travel lanes, parking, and light rail are all functioning in the same roadway right-of-way

Examples and Resources: Smart Growth America Resources Page; Salt Lake City's Ordinance; Salt Lake County Ordinance; WFRC Vision, Mission, and Principles

Promote Increased Connectivity on New & Existing Streets

Smaller block lengths and more frequent intersections promote walkable and bikeable neighborhoods. A street connectivity index that calculates the number of street links between intersections divided by the number of street nodes can help ensure that street networks are appropriately connected. A traditional grid like downtown Farmington's typically has an index of 2.0 or higher.

Farmington City should consider establishing a street connectivity retrofit plan to address the existing street system. In addition to a quantitative approach (link-node), this plan recommends qualitative considerations of how comfortable, inviting, and well-maintained existing and planned connections are. WFRC is currently developing a regional study that would quantify local benefits of improved street connectivity. Resources and tools from that study could be helpful to the City if they pursue such a plan or policy.

Examples and Resources: Kentucky Transportation Cabinet, Street Connectivity Zoning and Subdivision Model Ordinance

Adopt a Form-Based Code

Form-based codes can provide development and permitting incentives that would support development patterns that contribute to an environment that is friendlier to people walking and bicycling. Focusing on the physical forms of buildings and development, form-based codes encourage more compact development while maintaining the city's identity, history, and community values. This approach often results in more and improved opportunities for investment, economic development, and walking and bicycling.

Examples and Resources: Wasatch Choice for 2040 Form-Based Code Tool

Pedestrian Overlay Districts

This type of overlay district helps create what the American Planning Association calls "a safe, attractive pedestrian-friendly environment where the risk of pedestrian injuries or fatalities is minimized through the application of appropriate development standards."

Pedestrian overlay districts are superimposed on one or more zones on a zoning map. Allowed uses, development, architectural elements, and circulation design encourage development that naturally foments pedestrian activity and encourages active commercial and service uses on the ground floor of buildings.

Essentially, by designing for pedestrians near existing or future homes, businesses, parks, and schools, the City can provides services more efficiently, spur economic opportunities, create place identity, reduce conflicts between transportation modes, mitigate congestion, and reduce travel and parking demand while also reducing infrastructure and utility costs.

Potential locations for pedestrian overlay zones could be near planned transit-oriented development, in downtown, or where economic development is desired.

Examples and Resources: American Planning Association's Model Ordinances to Help Create Physically Active Communities; Raleigh, NC Pedestrian Business Overlay District Code Language

School Zone and Neighborhood Design Policies

The City should develop or adopt design and development standards that prioritize connectivity between homes and schools. Over time, implementation of such standards will decrease distances between homes and schools, reduce the need for and cost of bussing students to and from schools, improve safety along and across roadways near schools, and reduce parking and drop off demand for vehicles accessing school zones.

In addition to development standards that improve connectivity to schools, the City should choose several treatments from *Appendix A: Design Guidelines* to

Some elements of pedestrian overlay districts are found on Farmington's Main and State Streets downtown, like zero-setback buildings, shade trees, and ground floor commercial uses

Several new schools have implemented important safety improvements at or near their properties (Photo: Shaunna Burbidge)

implement at and near new or renovated schools within city limits. Coordination with Davis School District and UDOT is encouraged in order to fund, implement, and maintain these improvements.

Examples and Resources: Safe Routes to School Guide's Engineering Webpage

Road Surface and Paving Standards

Farmington City should continue to investigate using a smaller standard paving aggregate chip size, such as 1/4 inch or 3/8 inch, on roads that are or may be used by bicyclists, and especially on the most popular on-street biking routes.

Smaller chip sizes and shapes that lay flat without the need for years of compaction, in addition to the use of a seal coat (an additional coat of oil applied after the chip) will greatly improve pavement smoothness and bicyclist comfort. The City should also consider the following pavement management strategies:

- Maintain a smooth, pothole-free surface
- Ensure that the finished surface on bikeways does not vary more than ¼ inch on new roadway construction
- Maintain pavement so ridge buildup does not occur at the gutter-to-pavement transition or adjacent to railway crossings

The chip size on an Angel Street project in Kaysville (pictured before resurfacing was complete) raised some concerns from residents and bicyclists (Photo: Shaunna Burbidge)

- Inspect the pavement 2 to 4 months after trenching construction activities are completed to ensure that excessive settlement has not occurred

Examples and Resources: Washington State DOT Pavement Surface Condition Field Rating Manual for Asphalt Pavements

PROGRAM RECOMMENDATIONS

These non-infrastructure program recommendations can encourage people to walk and ride more often by complementing the built infrastructure network and removing some of the common stigmas or barriers to walking and bicycling.

Unified Wayfinding Program

Development of a complete wayfinding system for Farmington's walking and bicycling network can help publicize and facilitate use of active transportation facilities in the city.

Wayfinding signage provides destination, direction, and distance information to bicyclists and pedestrians

Bicycle wayfinding signage in Jackson, Wyoming

navigating through the City. Wayfinding signs that highlight bikeways, ideal walking routes, bike parking locations, and nearby points of interest can also be coupled with kiosks at major destinations. If desired, Farmington City should coordinate with surrounding cities and Davis County to ensure consistency with any future local and regional wayfinding standards.

Examples and Resources: Jackson, WY Bicycle Improvement Plan's Bikeway Wayfinding Chapter; Logan, UT Bicycle and Pedestrian Wayfinding System; Fort Collins, CO Bicycle Wayfinding Network Master Plan

Bicycle Parking Program / Policy & Development Regulations

Bicycle parking is an important component of the bicycle network. Farmington City should consider implementing the Association of Bicycle and Pedestrian Professionals' (APBP) Bicycle Parking Guidelines into its respective development code as well as creating a standalone economic development and business outreach program. This two-pronged approach will address proper rack design, placement, and quantity of bicycle parking. The former will ensure that future development or redevelopment includes secure parking for people arriving by bicycle while the latter can offer reduced cost bike racks to requesting businesses.

Examples and Resources: Association of Pedestrian and Bicycle Professionals' (APBP) Bicycle Parking Guidelines

Bicycle and Pedestrian Count Program

One way to determine the success of the walking and bicycling system is an on-going or annual program that counts bicyclists and pedestrians. Tracking user counts can identify which facility and program improvements are increasing bicycling and walking rates, reducing crashes involving bicyclists and pedestrians, and improving overall perceived safety and comfort. Automated, off-street shared-use path counters should be installed along key segments of popular corridors to provide reliable, simple, day-to-day collection of user counts. Traffic signals with the capability to count bicyclists and pedestrians should also be specified as signals are installed or upgraded.

The data gleaned from this program will also simplify creation of the Annual Report recommended in the implementation chapter of this plan.

Examples and Resources: National Bicycle and Pedestrian Documentation Project; Utah Bicycle and Pedestrian Counts Guidebook

Sidewalk and Crossing Infill & Construction Program

Construction, management, and maintenance programs help renew and expand sidewalk networks. This program has the following program and policy components:

New Construction or Rehabilitation in the City or County's Right of Way – The City should coordinate improvements and bid out sidewalk, crossing, and signal construction and other rehabilitation projects once a year at as high of a volume as can be accommodated for the best prices and efficiency. Sidewalks near schools should be prioritized first, followed by gaps that would greatly enhance the overall connectivity of the network.

Sidewalk replacement and expansion – The City should continue or begin to implement the following sidewalk strategies, programs, or policies to encourage sidewalk rehabilitation and construction where property owners are involved.

A gap in the sidewalk near Farmington library branch

- Offer no-interest (for partly-financed repairs) and low-interest (for entirely-financed repairs) loans to property owners who wish to replace or rehabilitate sidewalk that fronts their property. The City should ensure that funding for the no- or low-interest rate loans is available each year
- Dedicate funding to an expanded sidewalk replacement or expansion program through a 50/50 cost sharing sidewalk replacement program where sidewalk construction costs are divided evenly between the City and the property owner, or, implement a "Health Plan" style sidewalk replacement policy in which the financing model is based on the concept used in the health insurance industry. This policy allows property owners to pay in a fair amount regardless of property size or frontage length.

Crosswalk Policy – The City should adopt a crosswalk policy that establishes appropriate crosswalk types for specific roadway crossing types. High-visibility, piano key-style marked crosswalks should be installed at school crossings, busy intersections, and midblock crossings; parallel bar markings may be installed at other acceptable locations. This is especially important where sidewalks are present. ADA-compliant curb ramps should also always be provided when crosswalks are installed.

Examples and Resources: Helena, MT Neighborhood Transportation and Volunteer Sidewalk Program

Maintenance Program

As the existing system is refined and proposed recommendations are implemented, the City should establish a multi-departmental maintenance program that involves, at a minimum, the Public Works and Parks and Recreation Departments in order to provide sweeping, snow removal, pavement management, and weed abatement and eradication.

In order to reduce future costs, shared-use sidepaths (adjacent to or affected by roadways) should not be constructed below the level of the adjacent roadway. Building them at or above the roadway level will decrease debris runoff from the road, flood risk, and the need for additional path maintenance.

A small tractor with a narrow plow attached clears a separated bike lane during a winter snow storm in Salt Lake City (Photo: SLC Public Works)

Additionally, the City or other agencies coordinating and implementing bicycling and walking facilities in Farmington should be judicious in choosing vegetation that is compatible with the facility and the climate (i.e. eliminating puncture vines and other noxious weeds along paths), reduce the burden on the maintenance program, and reduce water demand.

Examples and Resources: Winter Bike Lane Maintenance - A Review of National and International Best Practices; Advocacy Advance - How Communities are Paying to Maintain Trails, Bike Lanes, and Sidewalks

SYSTEM-WIDE RECOMMENDATIONS

Some publicly-requested improvements to the existing system could not be easily shown on a map. Instead, the following are global, systemic recommendations.

Shared-use Path Access Control

Improving the current access control along the D&RGW Rail Trail (double, off-set gates) was one of the most common public comments during the online survey, interactive mapping exercise, and open house. Most cited the difficulty with which they maneuvered bike trailers, strollers, trail-a-bikes, and their own bicycles around one or both gates. Several cited first or secondhand accounts of falls at or near the gates because of this difficulty.

Although restricting motor vehicle access to the trail is necessary, doing so by physical means is not recommended unless there is a documented problem. "No Motorized Vehicles" signs are normally sufficient.

There are several methods that the City could test at several different locations in order to control trail and roadway user speeds and increase awareness of trail users at intersections. Before and during the test, the City should poll users to identify the most desired method of access control. Additional measures and more detail in the AASHTO *Guide for the Development of Bicycle Facilities*, Chapter 5, and *Appendix A: Design Guidelines*, should inform and direct these solutions:

- **Lateral shift of or curve in trail alignment.** Introducing an artificial lateral shift or curve in the very linear alignment of the Rail Trail will slow users to the desired speed, depending on curve radii.
- **Perpendicular pavement markings.** Install thermoplastic or other raised pavement markings perpendicular to the trail with increasingly less space between each one as the trail approaches a crossing.
- **Perpendicular pavement cuts.** A similar technique to pavement markings, but using negative space to provide a tactile warning for trail users approaching a crossing. Ensure that the cuts do not negatively affect the pavement quality or longevity.
- **Split path with landscaping.** Split the path tread into two directional sections separated by low landscaping.
- **Large informational pavement markings.** Place larger "Trail X-ing" markings on trails and trail approaches that capture trail users' and motorists' attention and slow them down.
- **Open one of the two gates.** Slow and deflect trail users without requiring two turns around two gates on each side of each crossing.

Existing gated access control of the D&RGW Rail Trail

The above example shows a curve in the trail alignment that creates a near perpendicular crossing and perpendicular pavement markings that visually and tactilely slow trail users before the intersection. Creating an artificial curve in the trail alignment will slow trail users and improve crossing safety by bring the crossing closer to perpendicular to the roadway. Crossings should be, at a minimum, 60, and ideally, 90 degrees

Split path treads with low landscaping

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A young resident riding her bike next to a local residential street (Photo: Russ Lindberg)

5: Prioritization & Implementation

Introduction

Implementation strategies for active transportation projects require a blend of careful planning and opportunistic decision-making. On-street projects, like bike lanes, can often be implemented quickly and efficiently when coordinated with planned roadway projects or pavement management activities like overlays or seal coatings. Conversely, shared-use path projects may require more extensive easement negotiations, permitting, or fundraising to reach construction.

The following project prioritization methodology should serve as a general guide for prioritizing investment in the active transportation system. However, flexibility in implementation is highly encouraged when opportunities arise to share resources, achieve cost savings, or partner with other agencies (such as UDOT, Davis School District, Davis County, or UTA).

For each project identified as part of the proposed system, scoring was established based on criteria and weighting agreed upon by the project's Steering Committee, including City staff. Spot improvements associated with proposed routes should default to the recommended phasing for the route they help facilitate, even if scoring indicates another (especially an earlier) phase.

Proposed projects were classified into three categories:

- **Off-street projects** (shared-use paths, unpaved trails, and sidewalks)
- **Spot Improvements** (intersection and crossing improvements, signals and beacons, grade-separated crossings, etc.)
- **On-street projects** (bike lanes, buffered bike lanes, separated bike lanes, and bicycle boulevards)

Project Prioritization Criteria

The project prioritization framework relies upon facility category-based criteria. The following criteria will be applied to each facility (except "Resurfacing Projects", which is only applicable to on-street bicycle facilities). Each recommended facility will be assigned a numeric value to the degree it meets the criteria requirements. The criteria values are outlined in Tables 5.1 and 5.2. The criteria multipliers were determined by the Steering Committee and can be adjusted by City preference to align with Farmington's values and priorities in the future.

Scoring criteria are generally divided into two sections:

- Positive scoring criteria, which possess the ability to raise a project's priority
- Negative scoring criteria, which possess the ability to lower a project's priority.

(+) POSITIVE SCORING CRITERIA (SEE TABLES 5.1 AND 5.2)

Public Support

Public support is an important criterion when evaluating potential bicycle and pedestrian facility improvements. Throughout the Kaysville & Farmington Active Transportation Plan process, the project team received feedback from more than 1,000 people via an online public survey and heard from several hundred more at a public open house and through the project website. Input received through these means will be used to determine the scoring of this category. Additionally, latent or apparent demand for a facility will fall under this criteria.

Connectivity to Existing Facilities

Creating connectivity to existing bicycle or pedestrian facilities enable more trips to be made and provides bicyclists or pedestrians multiple routes for reaching their destinations. Facilities that connect to an existing path, bike lane, or other dedicated facility will receive points for this scoring criterion.

Connectivity to Proposed Facilities

In addition to the existing bicycle and pedestrian network, this plan recommends the addition of many projects throughout the city. While not as immediately effective for bikeway continuity, facilities that connect to proposed facilities will, in time, help create a robust and cohesive network. Proposed facilities that intersect with other proposed facilities will be awarded points for this criterion.

Network Gaps

Gaps in the bicycling and walking networks discourage bicycling and walking because they limit route continuity, require users to choose less direct paths to access their destinations, or don't allow access whatsoever by bicycle or on foot. Facilities that fill gaps in the existing bicycling and walking network will qualify for this criterion.

Connectivity to Parks or Civic Centers

Increasing accessibility to parks and civic locations (such as City Hall or the library) was a popularly requested improvement in the public involvement process and projects that add or improve upon connectivity to these destinations qualify for this criterion.

Connectivity to Schools

About 1/3 of Farmington's population is under the age of 16 and cannot drive themselves to school. Even for those over 16, able to drive, and attending high school, walking and bicycling to school can improve academic performance. Across the board, reducing the number of students who are driven or bussed to school will reduce traffic volumes and congestion, and will improve air quality. In an effort to encourage more students to walk and ride a bicycle to school and to help parents and guardians feel comfortable allowing their children to do so, proposed facilities that directly connect to or are within ¼ mile of any K-12 school qualify for this prioritization criterion.

Connectivity to Churches

Increasing accessibility to the churches and other places of worship in Farmington can help reduce traffic congestion. With improved connections and opportunities to walk and bike to church, community members have the opportunity to decrease driving trips and amount of space needed for parking lot. Projects that connect to or are within ¼ mile of churches and worship center properties qualify for this prioritization criterion.

Connectivity to Retail Centers

Retail and commercial centers, like Station Park, Downtown, and grocery stores, represent major destinations used by residents and visitors every day. Increasing bicycle and pedestrian connectivity to these destinations will allow many of these trips to be converted into walking and bicycling trips. Projects that connect directly to or are within ¼ mile of retail centers qualify for this prioritization criterion.

Connectivity to Employment Centers and Jobs

Even though less than 20% of daily trips in Davis County are between home and work, commute trips to jobs in Farmington can be converted into bicycling and walking trips, especially when the trip begins with transit. Bicycling and walking facilities that connect to employment centers, and thereby allow employees to get to work more easily on foot or by bike, qualify for this criterion.

Connectivity to Transit

As evidenced earlier in this plan, people are much more likely to use transit if they can get there by bike or on foot. Improving connections to transit stations, like FrontRunner, and Park and Ride locations, will improve perceived safety and comfort, as well as encourage people to ride transit more. Facilities that provide this connectivity to transit qualify for this criterion.

Safety

Maintaining or improving safety is a prerequisite for all bicycle and pedestrian projects. Safety is also the primary concern for people when choosing to ride or walk instead of drive. Projects that address or remedy existing safety issues for bicyclists and/or pedestrians and/or are located at the location or within 1/8 mile of a crash that involved a bicyclist or pedestrian qualify for this criterion.

Cost Efficiency

Projects that require little capital investment but yield high benefits for all users, but especially for bicyclists and pedestrians, are attractive projects for immediate implementation following adoption of this plan. These projects will demonstrate progress and foster momentum for difficult or costly improvements in the future. Projects that greatly improve bicycling and walking conditions in respect to their capital costs qualify for this criterion.

Resurfacing Projects (only applicable to Table 5.2)

On-street bicycle facilities like bike lanes, buffered bike lanes, and separated, or protected, bike lanes can more easily be installed when a street is scheduled to be resurfaced, seal coated, or widened. Furthermore, developers should be required to include recommended facilities in the Kaysville & Farmington Active Transportation Plan that are located on streets they are constructing, improving, or otherwise impacting significantly. Facilities that coincide with street repaving or resurfacing projects will meet this scoring criterion.

(-) NEGATIVE SCORING CRITERIA (SEE TABLES 5.1 AND 5.2)

Jurisdiction

This criterion considers which agency or agencies own the right-of-way in which projects are proposed and whether or not the project is outside of City limits or on non-City-owned land. Projects within the City limits and within the public right-of way receive no deduction. Projects within the City limits but owned or managed by another entity (i.e. UDOT, private property owner) would receive a deduction in points. Projects that lie outside the City limits and the public right-of-way would receive the maximum deduction in points possible for this criterion. This negative criterion and scoring is not an indictment of the project's value, but rather that the project is more difficult to implement and may be built and funded by someone else.

Development Potential

This criterion considers whether or not a proposed facility has the potential to be constructed by future private development. This criteria seeks to lower the priority of bicycle and pedestrian improvements that could be constructed by private development in the future. Projects that could be likely be built by private development in the next ten years would qualify for this criterion.

Table 5.1 *Recommended Off-Street Linear or Spot Improvement Project Prioritization Criteria*

Criteria	Score	Multiplier	Total	Description
Public Support	2	4	8	Identified multiple times by the public as a future facility, or, significant demand
	1		4	Identified by the public once as a future facility , or, reasonable demand
	0		0	Not identified for a future facility during this public involvement process
Connectivity to Existing	2	3	6	Direct access to two or more existing facilities
	1		3	Direct access to one existing facility
	0		0	Does not directly or indirectly access an existing facility
Connectivity to Proposed	2	2	4	Direct access to two or more proposed facilities
	1		2	Direct access to one proposed facilities
	0		0	Does not directly access any proposed facilities
Network Gaps	2	3	6	Fills a network gap between two existing facilities
	1		3	Fills a network gap between an existing and a proposed facility
	0		0	Does not directly or indirectly fill a network gap
Parks & Civic Centers	2	1	2	Direct access to a park or civic center (library, City Hall)
	1		1	Secondary access to a park or civic center (within ¼ mile)
	0		0	Does not provide connectivity to any parks or civic centers
Schools	2	5	10	Direct access to a school
	1		5	Secondary access to a school (within ¼ mile)
	0		0	Does not directly or indirectly access a school
Churches	2	1	2	Direct access to a church
	1		1	Secondary access to a church (within ¼ mile)
	0		0	Does not provide direct or indirect access to a church
Retail Centers	2	2	4	Direct access to a retail center
	1		2	Secondary access to a retail center (within ¼ mile)
	0		0	Does not provide any connectivity to a retail center
Employment Centers	2	3	6	Direct access to an employment center
	1		3	Secondary access to an employment center (within ¼ mile)
	0		0	Does not provide any connectivity to an employment center
Transit	2	3	6	Direct access to a FrontRunner station or Park and Ride
	1		3	Secondary access to a FrontRunner station or Park and Ride (within ¼ mile)
	0		0	Does not provide any connectivity to a FrontRunner station or Park and Ride
Safety	2	5	10	Addresses a significant safety problem or at the location of a crash
	1		5	Addresses a minor safety problem or within 1/8 mi of a crash
	0		0	Does not directly contribute to improving a safety problem
Cost Efficiency	2	4	8	Provides exceptional cost-benefit value
	1		4	Provides above average cost-benefit value
	0		0	Provides average cost-benefit value
Jurisdiction	2	-1	-2	Located outside of City limits and not in the public right-of-way
	1		-1	Located in the City but on land owned or managed by another entity
	0		0	Located in the City and within the public right-of-way
Development Potential	2	-3	-6	Likely funded, constructed through development in short term
	1		-3	Likely funded, constructed through development in medium term
	0		0	Development not likely, or through development but in long term

Table 5.2 *Recommended On-Street Project Prioritization Criteria*

Criteria	Score	Multiplier	Total	Description
Public Support	2	4	8	Identified multiple times by the public as a future facility, or, significant demand
	1		4	Identified by the public once as a future facility, or, reasonable demand
	0		0	Not identified for a future facility during this public involvement process
Connectivity to Existing	2	3	6	Direct access to two or more existing facilities
	1		3	Direct access to one existing facility
	0		0	Does not directly or indirectly access an existing facility
Connectivity to Proposed	2	2	4	Direct access to two or more proposed facilities
	1		2	Direct access to one proposed facilities
	0		0	Does not directly access any proposed facilities
Network Gaps	2	3	6	Fills a network gap between two existing facilities
	1		3	Fills a network gap between an existing and a proposed facility
	0		0	Does not directly or indirectly fill a network gap
Parks & Civic Centers	2	1	2	Direct access to a park or civic center (library, City Hall)
	1		1	Secondary access to a park or civic center (within ¼ mile)
	0		0	Does not provide connectivity to any parks or civic centers
Schools	2	5	10	Direct access to a school
	1		5	Secondary access to a school (within ¼ mile)
	0		0	Does not directly or indirectly access a school
Churches	2	1	2	Direct access to a church
	1		1	Secondary access to a church (within ¼ mile)
	0		0	Does not provide direct or indirect access to a church
Retail Centers	2	2	4	Direct access to a retail center
	1		2	Secondary access to a retail center (within ¼ mile)
	0		0	Does not provide any connectivity to a retail center
Employment Centers	2	3	6	Direct access to an employment center
	1		3	Secondary access to an employment center (within ¼ mile)
	0		0	Does not provide any connectivity to an employment center
Transit	2	3	6	Direct access to a FrontRunner station or Park and Ride
	1		3	Secondary access to a FrontRunner station or Park and Ride (within ¼ mile)
	0		0	Does not provide any connectivity to a FrontRunner station or Park and Ride
Safety	2	5	10	Addresses a significant safety problem or at the location of a crash
	1		5	Addresses a minor safety problem or within 1/8 mi of a crash
	0		0	Does not directly contribute to improving a safety problem
Cost Efficiency	2	4	8	Provides exceptional cost-benefit value
	1		4	Provides above average cost-benefit value
	0		0	Provides average or below average cost-benefit value
Resurfacing Projects	2	2	4	Street likely repaved or improved within 5 years, or, bicycle boulevard
	1		2	Street likely repaved or improved in 6-10 years
	0		0	Street unlikely or not scheduled to be improved for >10 years
Jurisdiction	2	-1	-2	Located outside of City limits and not in the public right-of-way
	1		-1	Located in the City but on land owned or managed by another entity
	0		0	Located in the City and within the public right-of-way
Development Potential	2	-3	-6	Likely funded and constructed through development within 5 years
	1		-3	Likely funded and constructed through development in 6-10 years
	0		0	Development not likely, or through development but in >10 years

Implementation Strategies

Implementation of the Farmington Active Transportation Plan will take place incrementally over many years. Due to the development potential of existing open space, the City should allow the processes of prioritization and phasing of bicycle and pedestrian improvements to be fluid and adjust to actual growth and future development. Flexibility and opportunistic implementation of projects are key to improving the bicycling and walking system. The following strategies can guide the City toward developing the project and policy recommendations in this plan.

IMPLEMENTATION STRATEGY 1. ESTABLISH ACCOUNTABILITY FOR ACTIVE TRANSPORTATION

It is important to establish accountability for the implementation of the active transportation system to ensure that this plan's recommendations are implemented. In the near-term absence of a staff member dedicated to bicycle and pedestrian planning and implementation, Farmington City should seek to implement the following organizational processes to help ensure that active transportation issues are being monitored and advanced.

Near Term	• Establish an Active Transportation Task Force made up of City staff to include, at a minimum, the Community Development Director, representative from the Planning Department, Parks and Recreation Director, and Public Works Director. The Task Force should meet quarterly to discuss issues, needs, funding opportunities, and to ensure that possible recommendations are being executed.
Near/Mid Term	• Consider establishing a citizen-led Bicycle and Pedestrian Advisory Committee. Integrate the Bicycle and Pedestrian Advisory Committee into applicable City projects and review processes.
Term	• Hire a part or full-time bicycle and pedestrian coordinator to monitor the system, pursue funding, manage project implementation, and lead programs within the community.

IMPLEMENTATION STRATEGY 2. ESTABLISH THE PLAN AND DESIGN GUIDELINES

The Active Transportation Plan includes many recommended improvements and implementation strategies for the future. Work with appropriate entities within and outside of the City government structure to ensure that projects are implemented in an orderly, opportunistic way.

Near Term	• Adopt the Farmington Active Transportation Plan. • Complete the prioritization exercise using criteria established in this chapter and update regularly. • Further define the phases (i.e. 1-5, 6-10, 10+ years) in which projects will be placed after prioritization. • Consult the *Bicycle & Pedestrian Facility Design Guidelines* when new roadways are planned so that they can be as uniform, safe, and connective as possible. • Incorporate the Active Transportation Plan into development processes to ensure future development adheres to the plan's recommendations.

IMPLEMENTATION STRATEGY 3. STRATEGICALLY & OPPORTUNISTICALLY PURSUE PROJECTS

Near Term	• Pursue capital improvement or grant funding for high priority projects first. • In the case where grant requirements or construction in conjunction with another project make a lower priority project possible, pursue funding sources for that project regardless of priority or ranking.

IMPLEMENTATION STRATEGY 4. INCREMENTALLY IMPLEMENT PROJECTS

Projects can be developed incrementally with available resources or in conjunction with other projects until funding is secured to complete the project in full.

Near / Mid / Long Term	• Piggyback on pavement management projects in order to more easily implement on-street facilities that require a clean slate, road diet, or other roadway design changes.
Near / Mid / Long Term	• Consider developing long and/or expensive projects in any prioritization phase incrementally based on available resources and/or funding.

IMPLEMENTATION STRATEGY 5. REGULARLY REVISIT PROJECT PRIORITIZATION

The project prioritization criteria in this Plan and subsequent ranking and phasing by City staff have been developed based on input from the project Steering Committee. The City should revisit the Active Transportation Plan every two years to evaluate progress on project development and rescore and reprioritize lower priority projects as higher priority projects are implemented and completed. Lower priority projects should be reviewed as necessary, adding new projects, removing completed projects, and revising prioritization criteria and scoring as conditions change.

Mid Term	• Regular review and update of the prioritized project list by City staff, with input from the Active Transportation Task Force and, when initiated, the Bicycle and Pedestrian Advisory Committee (defined in Strategy 1).

IMPLEMENTATION STRATEGY 6. PERFORMANCE MEASURES

Ongoing evaluation at a project, neighborhood, and city level can provide the City and stakeholders important information used to approximate use, demand, and effectiveness of facilities, policies, and programs. Evaluation takes many forms, including counts, surveys, user behavior analysis, retail sales analysis, vacancy rates, and safety audits.

As the City implements the recommendations of this plan, some key indicators should be used to measure success and track progress. A formal annual analysis and associated reporting can also beneficial to show change, improvement, and success over time.

Near / Mid / Long Term	• Implement a volunteer-driven manual count and survey of pedestrians and bicyclists that follow the standards established by the National Bicycle and Pedestrian Documentation Project (NBPDP). According to NBPDP, "without accurate and consistent demand and usage figures, it is difficult to measure the positive benefits of investments in [active transportation], especially when compared to other transportation options such as the private automobile." • Supplement and improve manual counts through automated data collection methods that would allow for more accurate usage and trend analysis. • Create an annual report that summarizes and charts trends in participation, reported crashes, implementation of facilities, grant successes, events, and infractions related to walking and bicycling.

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Parts of the D&RGW Rail Trail were constructed with federal monies and others with local capital funds.

6: Funding

Implementation of the proposed bicycle and pedestrian system will often require funding from local, regional, state, and federal sources and coordination with multiple agencies. To facilitate funding efforts, this section presents a brief overview of different funding sources and strategies.

Funding Sources

Many funding sources are potentially available at the federal, state, regional, county, and local levels for Farmington City to implement the projects in the Active Transportation Plan. The majority of non-local public funds for bicycle and pedestrian projects are derived through a core group of federal and state programs. Federal funds from the Surface Transportation Block Grant Program (STBGP) are allocated to UDOT and Wasatch Front Regional Council (WFRC) and distributed by those agencies proportional to population, allowing funding to get to as many different types of communities as possible. Other programs such as the TIGER (Transportation Investments Generating Economic Recovery) grants can be used for "shovel ready" projects that meet federal transportation goals and benefit the country as a whole. County and/or City funds may also be used to construct bicycle and pedestrian facilities.

Tables 6.1 through 6.7 provide a list of funding sources that may be applicable to projects identified in this Plan. Most of these sources are competitive and require the preparation of applications. For multi-agency projects, applications may be more successful if prepared jointly with other local and regional agencies.

The City should also take advantage of private contributions, if appropriate, in developing the proposed system. This could include a variety of resources, such as volunteer or in-kind labor during construction, right-of-way donations, outreach, planning and design, or monetary donations towards specific improvements.

Additionally, the City should develop a dedicated local funding source for active transportation improvements through a general fund allocation, which will be sustainable funding that can be used to leverage other sources as well as develop projects. In addition to these funds, active transportation projects can be funded through a variety of measures at a local level: bonds financing, special improvement districts, or specified local sales taxes. The recently passed Davis County Proposition One, a $0.025 sales tax increase, will fund more than $11 million in local roadway, transit, and active transportation projects in Davis County in fiscal year 2017 alone. State transportation revenue will increase by $76 million that same fiscal year.

Table 6.1 *Local Bicycle and Pedestrian Funding Options*

Funding Opportunity	Eligible Project Types	Qualifications	Lead Agency	Submittal Specifics
Bond Financing	Varies	Varies	Varies	Though not a funding source, bonds are a financing technique. Money is borrowed against some source of revenue or collateral (i.e. parcel tax revenue). They do not increase total funding, but rather shift investment from future to present. A local successful precedent is the voter-approved Salt Lake County 2012 Parks and Trails Bond, which authorized $47M to complete the Jordan River Parkway, Parley's Trail, acquire land, and build new parks.
Special Assessment or Taxing Districts	Varies	Varies	Local Gov't	Local municipalities can establish special assessment districts for infrastructure improvements. Urbandale, Iowa established a special assessment program in 1996 for building sidewalks in existing developments where they were missing. Exception clauses allowed residents to apply for hardship status, or to allow residents to petition for sidewalks on only one side of the street rather than both.
Development Impact Fees	Varies	Varies	Local Gov't	Development impact fees are one-time charges collected from developers for financing new infrastructure construction and operations and can help fund bicycle and pedestrian improvements, if approved. Impact fees are assessed through an impact fee program.
New Construction	Varies	Varies	Local Gov't	Future road widening and construction projects are methods of providing bicycle and pedestrian projects. To ensure that roadway construction projects provide infrastructure where needed, it is important that the review process includes a designated bicycle and pedestrian coordinator or similarly assigned liaison at the City. Planned roadway improvements in Farmington should include bikeways and walkways.

Table 6.2 *Regional, State, and Federal Bicycle and Pedestrian Funding Options (Part 1/5)*

Funding Opportunity	Eligible Project Types	Qualifications	Lead Agency	Submittal Specifics
Highway Safety Improvement Program (HSIP)	Infrastructure and program safety improvements	Public road with a correctable crash history, expected to reduce crashes, positive cost-benefit ratio, or, a systemic safety project	UDOT Traffic & Safety	Program purpose is to reduce fatalities and serious injuries on public roads through infrastructure and programs. Like SSIP, HSIP can fund low cost, systemic improvements if benefit-cost is met. (http://www.udot.utah.gov/main/f?p=100:pg:0:::1:T,V:2933,)
Spot Safety Improvement Program (SSIP)	Infrastructure and program safety improvements	Location is crash-frequent, similar quals to the HSIP	UDOT Traffic & Safety	Because SSIP is only state, and not federal, money, spending can be more flexible to fix crash-prone locations before trends develop. (http://www.udot.utah.gov/main/f?p=100:pg:0:::1:T,V:575,)
Transportation Infrastructure Finance and Innovation Act (TIFIA) Loans	Large projects	Varies	USDOT	Like bonds, these loans are not funding but do provide financing options, including credit assistance in the form of direct loans, loan guarantees, and standby lines of credit for large, surface transportation projects of national and regional significance, as well as public-private partnerships.

Table 6.3 *Regional, State, and Federal Bicycle and Pedestrian Funding Options (Part 2/5)*

Funding Opportunity	Eligible Project Types	Qualifications	Lead Agency	Submittal Specifics
Bond Financing	Varies	Varies	Varies	See description in Table 6.1.
Sales Tax	Local roadways, transit, bicycle and pedestrian projects	Varies	Davis County, varies	Davis County passed a transportation-focused sales tax through HB 362 and Proposition One in 2015. Voters approved a $0.025 increase to fund local roads, transit, and bicycle and pedestrian projects. It is estimated that revenue from the tax will top $2.2 million for Davis County (government), $300,000 for Kaysville, $280,000 for Farmington, and $50,000 for Fruit Heights in 2017. Precedents include the San Diego region, which approves a half-cent sales tax in 2008 to generate funds for highway, transit, and local road (including bicycle and pedestrian) projects; and the Great Rivers Greenway in the St. Louis area, where voters passed a proposition in 2000 to create a 0.1% sales tax for parks, open space, paths, and trails.
Transportation and Land Use Connection Program (TLC)	Varies	Exhibits a strong land use and transportation link	WFRC	Formerly known as the Local Planning Resource Program, WFRC's TLC program provides a minimum of $40,000 in funding per project to cities who can provide at least a ~10% match (at least $4,000) in order to integrate land use and regional transportation plans. Eligible projects may include land use scenario visioning, small area plans, corridor plans, public participation, implementation of previously-adopted plans, projects requiring multi-jurisdictional coordination and support, and site assessments.
ADA Ramps	ADA-related improvements	For missing ADA ramps on State routes only	UDOT	Applications are submitted to the Region Coordinator. Missing ramps can be found in the UDOT database from a recent survey of ramps. (http://udot.utah.gov/main/uconowner.gf?n=13652716548952568)
Safe Sidewalks Program	Sidewalks	Sidewalks on State routes only	UDOT	Applications are submitted to the Region Safe Sidewalk Program coordinator and require scope and cost estimate. Local jurisdiction must agree to maintenance and the sidewalk must be built within one year of money allocation. (http://www.udot.utah.gov/main/uconowner.gf?n=104675223364328443)
Passenger Enhancements	Sidewalk projects and bicycle infrastructure	Sidewalk must be within half mile and bike infrastructure must be within three miles of a transit stop	UTA	Funding can be completed in two ways. The lead agency will share in the cost of the construction, if the submitting agency has already done design and is planning to construct. If the project is on UTA's priority sidewalk list, UTA will design and construct.

Table 6.4 *Regional, State, and Federal Bicycle and Pedestrian Funding Options (Part 3/5)*

Funding Opportunity	Eligible Project Types	Qualifications	Lead Agency	Submittal Specifics
State-Administered Community Development Block Grants (CDBG)	Street improvements	Best if project benefits low or moderate-income populations and part of a consolidated plan	HUD, State, and Local Gov't	The Grantee cannot be a principal city of a metropolitan statistical area, a city with more than 50,000 population, or a county with a population with more than 200,000. Applications are submitted to the State. (https://www.hudexchange.info/cdbg-state/)
Community Development Block Grants (CDBG) - Entitlement Communities Program	Street improvements	Best if project benefits low or moderate-income populations	HUD and Local Gov't	Grantee is a principal city of a metropolitan statistical area, a city with a population over 50,000, or a county with a population over 200,000, like Davis County. Part of a Consolidated Plan. (http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs/entitlement). Only cities under 50,000 that are also in counties above 200,000 qualify for the similar WFRC-administrated CDBG "Small Cities" program.
Surface Transportation Block Grant Program (STBGP)	Bicycle and pedestrian improvements, among others	Varies	WFRC and UDOT	In the new 2016 federal transportation act (FAST), the former STP is now known as the Surface Transportation Block Grant Program (STBGP) and includes the TAP (below). WFRC accepts concept reports for consideration of programming funds. This program has a state and an MPO component. An increase in the funding share for MPOs means that largers MPOs, like WFRC, will receive more funding.
Congestion Mitigation and Air Quality (CMAQ)	Bicycle and pedestrian improvements, among others	Reduce congestion, improve air quality in non-attainment/maintenance areas by shifting travel demand away from cars	WFRC	Projects must be included in the Transportation Improvement Program selection, administered by WFRC. Calls for projects from local communities are made yearly by WFRC.
Transportation Alternatives Program (TAP)	Bicycle and pedestrian improvements only	Funds can be used for construction, planning and design of on and off-road bicycle and pedestrian facilities	WFRC and UDOT	In the new 2016 federal transportation act (FAST), the former TAP will be part of the STBGP. Though program requirements will stay roughly the same, total funding has been increased slightly. If program remains the same, most projects will have an 80/20 federal/local match split and can include sidewalks, paths, trails, bicycle facilities, signals, traffic calming, lighting and safety infrastructure, and ADA improvements. Rails-to-trails conversions are also allowed. The Recreational Trails and the Safe Routes to School programs are included.

Table 6.5 *Regional, State, and Federal Bicycle and Pedestrian Funding Options (Part 4/5)*

Funding Opportunity	Eligible Project Types	Qualifications	Lead Agency	Submittal Specifics
Land and Water Conservation Fund (LWCF)	Bicycle and pedestrian paths and trails, or acquisition of land for paths and trails	Projects that create outdoor recreation facilities, or land acquisition for public outdoor recreation	DNR	Provides matching grants to states and local governments for the acquisition and development of public outdoor recreation areas and facilities. The program is intended to create and maintain a nationwide legacy of high quality recreation areas and facilities and to stimulate non-federal investments in the protection and maintenance of recreation resources. 50/50 match is required, and the grant recipient must be able to fund the project completely while seeking reimbursements for eligible expenses. (http://stateparks.utah.gov/resources/grants/land-and-water-conservation-fund)
Rivers, Trails, and Conservation Assistance Program	Planning assistance for bicycle and pedestrian projects	Staff support for facilitation and planning	National Park Service	Projects need to be related to conservation and recreation, with broad community support, and supporting the National Park Service's mission. Applicants must submit National Park Service applications by August 1 annually, including basic information as well as letters of support. The local contact is Marcy DeMillion, at 801-741-1012 or marcy_demillion@nps.gov.
Transportation Investments Generating Economic Recovery (TIGER)	Shovel ready, surface transportation projects	Positive estimated cost-benefit ratio meeting federal transportation goals, benefitting country as a whole	USDOT, State and Local Gov'ts	Approvals for the eighth round of TIGER, totalling $500 million, were signed into law in 2015. Pre-application and final application required. Projects involving highways, bridges, bicycle and pedestrian facilities, public transportation, rail, and intermodal are eligible.
State Legislation	Legislation dependent	Legislation dependent	State of Utah	State legislation can create laws that have dedicated bicycle funding components. Two examples of this are the Oregon "bike bill" which requires including bicycle and pedestrian facilities when any road, street or highway is built or rebuilt and the California Active Transportation Program grants, which provide state funds to cities and counties wishing to improve safety and convenience for bicyclists and pedesestrians. (http://oregon.gov/ODOT/HWY/BIKEPED/Pages/bike_bill.aspx and http://www.dot.ca.gov/hq/LocalPrograms/atp/)
Federal Lands Access Program (FLAP)	Planning, engineering, construction, and other activities	Projects must be on, adjacent to, or provide access to federal lands	UDOT	Fund is administered through UDOT in coordination with the Central Federal Lands Highway Division, which develops a Programming Decisions Committee. The Committee prioritizes projects, establishes selection criteria, and calls for projects. (http://www.cflhd.gov/programs/flap/ut/)

Table 6.6 *Regional, State, and Federal Bicycle and Pedestrian Funding Options (Part 5/5)*

Funding Opportunity	Eligible Project Types	Qualifications	Lead Agency	Submittal Specifics
FAST Act Safety Program	Safety improvements	States where >15% of fatal crashes involve bicyclists or pedestrians	UDOT	Over the last five years, 17.7% of fatal crashes in Utah have involved bicyclists and/or pedestrians, even though crashes involving these user types are only 2.8% of the total crashes. The FAST Act will create a safety program to fund projects that improve safety for bicyclists and pedestrians, administered through the state DOT.

Table 6.7 *Private, Non-Profit, or Corporate Bicycle and Pedestrian Funding Options*

Funding Opportunity	Eligible Project Types	Qualifications	Lead Agency	Submittal Specifics
Cambia Health Foundation Children's Health Program	Programs and possibly infrastructure	Projects must improve access to healthy foods, recreation facilities, and encourage healthy behavior for families.	Cambia Health Foundation	Grants are typically in $50,000 to $100,000 range. Focus is on programs. Contact foundation staff at cambiahealthfoundation@cambiahealth.org for additional information. (http://www.cambiahealthfoundation.org/programs/childrens-health)
People for Bikes Green Lane Project Grants	Bicycle infrastructure	Projects must improve the bicycling environment	People for Bikes	People for Bikes have awarded 272 grants to non-profit organizations and local governments in 49 states and the District of Columbia, since 1999.
People for Bikes Community Grants	Paths, rail trails, mountain bike trails, bike parks, BMX facilities, large-scale advocacy	Project funding should leverage federal funding and build momentum for bicycling	People for Bikes	People for Bikes have awarded 341 grants, totalling more than $2.9 million and leveraging nearly $670 million in public and private funding. This grant program is funded by partners in the bicycle industry.
REI Grants	Preservation and restoration	Non-profit, partner with local store	REI	REI awarded $4.2 million in grants to more than 300 non-profits for preservation and restoration projects in 650 locations. After a store/non-profit relationship is established, REI asks the non-profit to apply for grant funding. Unsolicited grant applications are usually not considered.
Community Fundraising	All	Small dollar amounts	Local Gov't, agency, or non-profit	Lead agency manages the details, marketing, and range of a community fundraising campaign. Successful examples include use of volunteer labor for path construction near Zion National Park in Springdale, Utah. Follow link below for more ideas. (http://www.bicyclinginfo.org/funding/sources-community.cfm)

Bike racks overflowing with bicycles, Eagle Bay Elementary students' primary mode of transportation to school

7: Conclusion

The Future of Walking & Bicycling in Farmington

Farmington already has one of the most extensive paved and unpaved trail systems in Utah and the density of shared-use facilities and on-street bikeways is among the highest in Utah. The City's foresight to undertake forward-thinking plans (like this one), leverage development, and include trails, sidewalks, and other facilities for bicyclists, pedestrians, hikers, and other non-motorized users in each municipal departments' priorities has and will continue to be invaluable in the future.

Farmington has already recognized the value of paths and trails in improving quality of life and serving as a valuable draw for prospective residents. Additionally, the young and family-oriented population in Farmington has embraced bicycling and walking to school. The purpose of this plan is to ensure that everyone can feel comfortable and safe walking and bicycling, especially as more people choose to call Farmington home.

Farmington's vision for this plan is to "improve quality of life and community health by connecting communities through safe walking and bicycling facilities and programs." This plan will help to bridge the divides between the east and west sides of the city that the public identified as their principal priority during the extensive public involvement process. In addition to improved facilities, like bike lanes, sidewalks, and paths, this plan recommends improving pedestrian and bicyclist connections over major linear barriers, like US-89, Main Street, 200 East, and Interstate 15.

One-third of Farmington's more than 20,000 residents are under 16 years old and are largely dependent on parents or caretakers for transportation. Improving on and off-street conditions and increasing connections for walking and riding bicycles will benefit everyone, but especially Farmington's youth. Increased rates of walking and bicycling to school alone will mean less congestion and safer connections near schools.

Funding the improvements recommended in this plan over the next 15-20 years will not be the onus of Farmington residents alone and should not be undertaken all at once. Nearly 30 different funding sources are identified in this plan (in addition to many more that do and will exist in the future at the local, regional, state, and federal level), giving Farmington diverse options to fund projects within the City. Partnering with UDOT to improve connectivity near, on, and across state roads and highways will also prove to be one particularly important method for cost-savings.

Additionally, as land uses change, development occurs, and associated projects are undertaken by partner agencies like UDOT, Davis School District, Davis County, and adjacent municipalities, projects may be implemented more easily and efficiently.

The analyses and recommendations in this plan will allow Farmington to improve, grow, and develop into an even greater city for bicycling and walking. Ultimately, the strategies outlined in this plan serve to make bicycling and walking safe, normal, and daily activities in the lives of those living, working, and recreating in Farmington.

Acronym Key

Acronym	Full Name	Local or National (if applicable)
AASHTO	American Association of State Highway Transportation Officials	National
ACS	American Community Survey	National
ADA	Americans with Disabilities Act	National
ADT	Average Daily Traffic	
APBP	Association of Pedestrian and Bicycle Professionals	National
APWA	America Public Works Association	National
CMAQ	Congestion Mitigation and Air Quality	National and Local
FHWA	Federal Highway Administration	National
GIS	Geographic Information System	
HUD	Department of Housing and Urban Development	National
ITE	Institute of Transportation Engineers	National
LWCF	Land and Water Conservation Fund	National
MPO	Metropolitan Planning Organization	
MUTCD	Manual on Uniform Traffic Control Devices	National and Local
NACTO	National Association of City Transportation Officials	National
NHTS	National Household Travel Survey	National
NICA	National Interscholastic Cycling Assocation	National and Local
RRFB	Rectangular Rapid Flash Beacon	
SRTS	Safe Routes to School	National
STP	Surface Transportation Program	National
TAP	Transportation Alternatives Program	National
TIP	Transportation Improvement Program	National
TIGER	Transportation Investment Generating Economic Recovery	National
TRB	Transportation Research Board	National
UDOT	Utah Department of Transportation	Local
UTA	Utah Transit Authority	Local
WFRC	Wasatch Front Regional Council	Local